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FORMERLY

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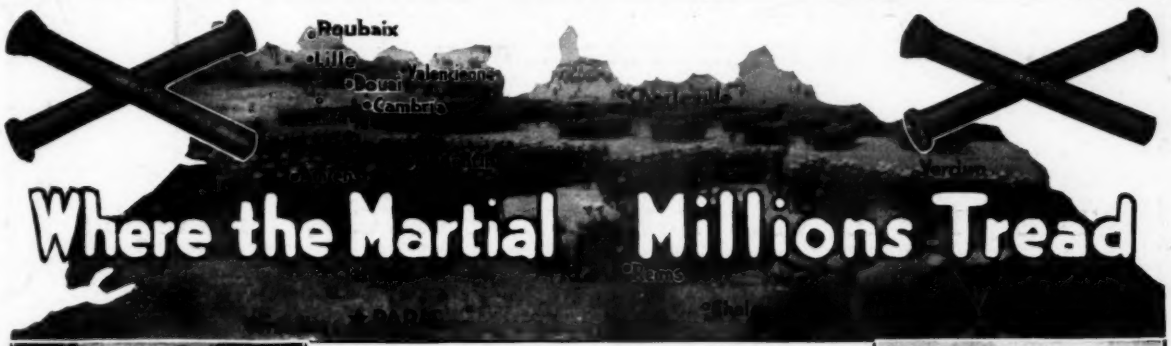

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Again, as for two and a half centuries past, pilgrims from earth's remotest corners will journey to Paris to view the beautiful fountains of the Parks of Versailles, the wonderful handiwork of Louis XIV, surnamed "The Great."

And, despite his desire for conquest and his dreams of a French universal monarchy, which embroiled him in numerous wars, men will, for generations yet to come, rise up and call him blessed who gave to the world the first indisputable proof of the DURABILITY of Cast Iron Pipe.

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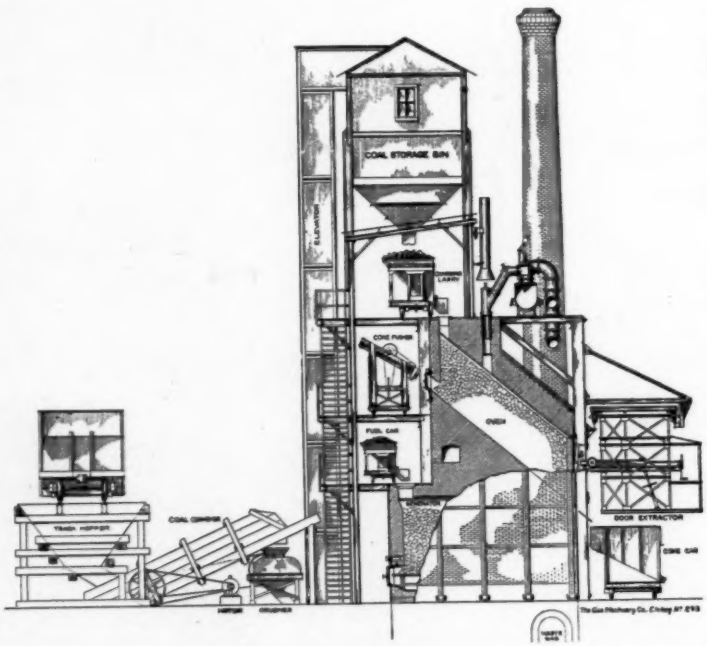

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Wide Variety of Duties Discharged by Women in English Gas Works

Gas Light & Coke Company Alone Employs 1100 and Contemplates Increasing the Number—South Metropolitan Company Employs 1000

By NORTON H. HUMPHRYS

A particular feature in the latest directors' reports to the shareholders of English gas companies was the prominent reference to the utilization of female labor, as a means of partially filling the places left vacant by enlistment on active service for the Nation, in which respect the gas industry has rendered excellent account. Previous to the war, nine gas works out of ten were independent of such assistance, but today there are few that are not depending to an important extent upon it.

The Gas Light & Coke Company alone have parted with 3,700 men, and enrollment to the extent of 50 or even 60 per cent of the total is not unusual. The heavy strain on the labor resources has necessitated drastic reduction of the outside or district department, entirely or to a large extent closing the maintenance and gas-fittings, and postponing all effort in the direction of new business. In some cases, it has been impossible to give the usual prompt attention to orders and complaints, the position in this respect having been aggravated during the recent exceptionally severe frosts, and many are deploring an increase in the unaccounted for gas, due to the fact that reports of leakage cannot be promptly followed up. The lighting restrictions have rendered the familiar figure of the lamplighter a vanishing quantity. But these urgent measures were not sufficient to meet the case.

Wide Variety of Duties

The Gas Light & Coke Company employs 1,100 women, and is contemplating an extension on that number. The duties performed by the new additions to the staff include clerical and office work, time keeping, weighbridge attendance, work in connection with handling purifying material, coke, and clinker, including delivery of coke in small lots to customers, motor driving, manufacture and maintenance of incandescent mantles, painting and packing meters and stores.

The South Metropolitan Gas Company makes a good second with about 1,000, who are assisting in nearly every department. The assistance of 190 women has proved a useful asset to the Brentford Gas Company, as they are already doing well, and giving promise of improvement following on extended experience.

The South Suburban Gas Company has employed up to date 138 females as partial substitutes for 342 absentees who are serving the colors, with satisfactory results. One hundred and eleven women are in the employ of the Newcastle & Gateshead Gas Company, as compared with none two years ago. The Cardiff Gas Company appreciates the practical and ready assistance that is being rendered by the women workers. At Croydon, 30 women are engaged in bagging sulphate and other residuals.

Dundee is another place where women are engaged in cleaning stoves, etc., and the management confesses that until now they did not know the capabilities of the sex. The Hornsey Gas Company is utilizing the services of 40 women, and the Glasgow Corporation Gas Department employs 200; 130 as meter readers, 30 as clerks, and the remainder in the meter testing and appliances repair department.

The North Middlesex Gas Company reports that out of a total of 170, 90 of the original staff have enlisted; that women are being engaged as substitutes as far as practicable, and that so far their employment had proved an agreeable surprise, both as to tractability and aptitude.

Not in All Cases an Unqualified Success

The innovation is not in all cases an unqualified success, but it is open to question whether this is due to the material or to the method of utilizing it. Considerable tact, judgment, and knowledge of human nature, is necessary in order to adopt the conditions of employment to the special peculiarities of the feminine temperament, and those that have been usual for male employees, may not be congenial or conducive to the best results, under altered circumstances. The best

service is secured under the supervision of competent lady superintendents possessing the necessary physiological knowledge to enable determination of the physical and other capabilities of applicants for employment, who can inquire with greater freedom as to details of health, etc., and obtain sufficient information to decide as to fitness or otherwise, and to allot each one to the most suitable position.

With women, as with men, the character and class of labor available is affected by local conditions, and varies greatly in different parts of the country. In common fairness, the efforts of women should not be compared with the efficiency of pre-war times, but with that supplied by male substitutes that are also new to the work.

The chairman of the Portsea Island Gas Company, referring to occasional failures in connection with the supply of gas during the past winter, admitted that at times they had been under the necessity of curtailing the supply pressure. In the autumn the directors made adequate arrangements for the maintenance of an efficient supply, but these were upset by the military authorities, who insisted on the release of more men, and the required number of substitutes was not obtainable.

It was necessary to make up the shortage as far as possible by the employment of women and boys, who had no previous experience of the work, and the time lost by the new employees showed a large increase on previous experience. This had seriously disarranged the working of all departments, and greatly reduced the standard of efficiency.

Two hundred and ninety-eight of the regular staff had been set free for active service, and about half that number of women were engaged in office work, meter reading, burner maintenance, gasfitting, stove and meter repairs, coal wheeling, coke loading, and handling of purification materials.

All Companies Dependent on Women to Important Extent

At South Shields, female labor has been utilized to the utmost extent in order to liberate men for active service. At present, 30 per cent of the employees are women, and the result is a reduction in efficiency, as the nature of the employment in a gas works did not lend itself to the capabilities of women, except to a very limited extent.

One might follow on to instance almost every gas undertaking in the country, irrespective of size or importance, as being dependent on female labor to an important extent, and that not only under the usual designation of light or black coat duties, such as office work, collecting debts, meter reading, slot clearance, and burner maintenance, but also for manual labor in the stores, fitting shops, purifier houses, and coke yards.

I have not heard that the ladies have as yet invaded the retort house, but they appear well in evidence in nearly all other departments, and in many are making good in a manner that indicates a prospect of permanent retention after the war, and that men who return to civil life after active military or naval service may, like Othello, find their occupation gone.

But they will not be left out in the cold. There will be arrears of repairs and renewals at the works, and extensions in the district, to catch up. And the women workers are not confined to the class that must of necessity seek a means of livelihood. Many of them enjoy affluence and position, and are actuated by patriotic rather than mercenary motives, being anxious to assist in the present National crisis by standing in for any capacity that will release a man for active service, rather than to secure a wage at the end of the week, and many are devoting their earnings to philanthropical objects. For one reason and another, a large number will be glad to return to a more civilized walk of life.

Gas Plays Important Part in Manufacture of Shoes

Samuel S. Amdursky Describes Process of Manufacture—Special Dryer Designed by Rochester Company

That gas has a prominent place in the manufacture of shoes will be evident when we follow the different steps necessary in the manufacture of footwear, declares Samuel S. Amdursky of the Rochester Railway & Light Company in an article in *Gas and Electric News*.

Shoe making may be divided into two main divisions: The minor division which includes turn shoes such as slippers, ladies thin house boots and babies shoes, and the major division in which the top of the shoe known as the upper is fastened to an insole and at least one out-sole and a heel. In this latter division are comprised various classes, shapes and qualities of goods from slippers up to long top or riding boots.

Either of the above divisions may be sub-divided into hand made and machine made shoes. For our purpose, however, we will describe the latter method only.

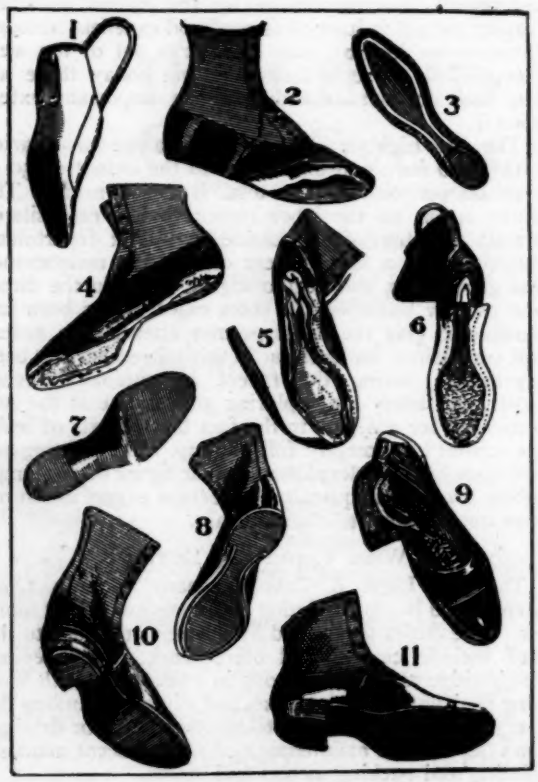


FIG. 2. STEPS IN MANUFACTURE OF SHOES

Making the Shoe

The designer or pattern maker who is quite familiar with the general shape and structure of feet, first originates the particular style that he believes will meet the taste of the public. This design is then laid out on paper from which metal edged patterns are duplicated.

The first step in the manufacture of the shoe itself is to cut out (either by hand or by a machine fitted with a properly shaped die) the upper leather and linings as shown in number 2 of Fig. 2, to be sent to the fitting department to be fitted and stitched. Eyelets or button holes are then fastened to the uppers and the whole is sent to the lasting department where the inner sole is cut out and fastened to a last with lasting tacks which is the exact shape and size of the finished shoe. The uppers are then drawn over the last and an inner sole by a lasting machine and tacked in place.

The shoe then passes to the trimming machine which removes all surplus material, while a staple driver fastens staples to the upper and inner sole, holding the upper firmly in place. A tack puller removes most of the tacks before the shoe is sent to the inseam stitcher, a machine which consists of many mechanical parts, including a gas-fired steam generator which furnishes heat for a wax bath.

The operator places a strip of leather about one inch broad over the edge of the upper and at the inner sole. This piece of leather is called a welt and is shown in number 5 of Fig. 2.

The three parts are sewed together with waxed cord before the sole is filled with a compound of cork and paste material, after which it is ready to receive the outsole.

The filler compound is kept in a workable condition by placing it in a steam-heated vessel, steam being furnished from the gas steam generator.

The filler is then smoothed off and coated with cement, while the sole material which had previously been tempered in a gas-fired water heater is also coated with cement. The sole together with the shank is then pasted to a last by the sole lasting machine.

The outer sole, shown in number 7 of Fig. 2, is then sewed to the upper and inner sole. After having the sole soaked in water to limber it up, the shoe is passed to the leveling machine which flattens the sole. The heel is then fastened in position and the shoe after being trimmed and shaped is sent to the burnishers.

These machines are equipped with special tools heated by an open gas flame, which put creases or corrugations on the welt and sole edge.

Other Uses of Gas

Preparatory to sand papering, the shoe is placed on a gas-fired air drier to remove any moisture which might be left in the sole of the shoe. If the sole is not perfectly dry, the leather will wrinkle and the shoe will lose its shape. A specially designed shoe drier originated by the Rochester company is shown in Fig. 1. The shoe drier consists of a galvanized box A having a screen cover B, the whole being supported by the angle iron construction C. The heater consists of two headers D from which branch pipes E lead into the flue F. The pipe burner G is placed inside of each header, as shown, and has as many flames as there are branches, each flame having direct access into each branch. The baffle plates H are provided below the heaters to direct the flow of the heated air uniformly.

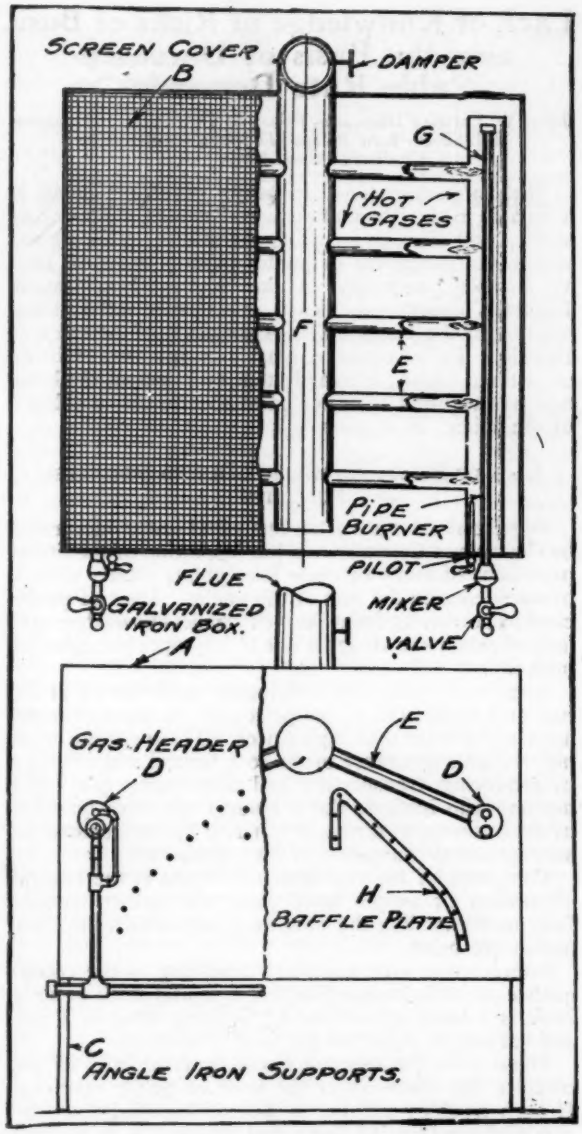


FIG. 1. ORIGINAL DESIGN OF GAS-FIRED DRIER

The particular drier here illustrated replaces a steam heated drier in a shoe factory making babies shoes. Due to the uniform temperatures the shoes taken from the gas heated drier are in a much better condition and shape for sand papering than with the steam heated drier.

The speed of the operation is also practically double while the heat regulation may be controlled at will. The design is such that one-half of the drier may be used if desired thus making the use of the drier flexible. The products of combustion do not come in contact with the shoes, and when the drier is not in use the gas is shut off and the fuel cost ceases.

From the drier the shoe goes through several finishing operations such as sand papering, blacking and burnishing the edges of the soles and heels, cleaning out any pegs which may have pierced through the inner sole, final inspection and boxing prior to shipping.

Lack of Knowledge of Risks of Business the Basis of Unreasonable Rate Demands

John W. Lansley Discusses Effect of Publicity on Business Relations—Low Prices No More Immune to Challenge than High Prices

The company engaged in selling gas to the public is amenable to state regulation as to its rates, character of service, and often its financing operations. This regulation is the outgrowth of public opinion, asserted John W. Lansley, secretary of the Southwestern Gas & Electric Company, of Chicago, in his paper at the annual meeting of the Natural Gas Association of America at Buffalo. To whatever extent it is just and fair or unjust and unfair, to exactly that same extent the business has acquired or neglected to acquire the confidence of the public, its customers.

Lack of Public Knowledge Due to Neglected Publicity

Regulatory laws are often fairly and justly interpreted by Courts and Commissions, but inspection of the literal provisions of many of these laws points clearly to lack of confidence on the part of the public. Lack of public confidence results from lack of public knowledge, and lack of public knowledge is due to improper or neglected publicity.

Attacks are made indiscriminately upon rates that are just and reasonable. Low prices are no more immune against challenge than high prices. These attacks come out of public ignorance of the cost, hazard and difficulty of producing, transporting and distributing gas. The persons who institute them, being themselves ignorant of the business, as a rule, are merely the instruments or self-appointed champions of the popular will.

Complaint of the character of service is the natural expression of people undergoing discomfort without fully understanding the conditions with which the companies are beset.

Interference with necessary financing is the consequence of a mistaken notion that a capital stock or bond issue is a basic element in determining what is a fair and reasonable price for the service rendered.

These three classifications embody practically all the troubles that come under the head of public relations. If such troubles are due to lack of knowledge on the part of the public, it follows that they can be minimized or reduced by proper publicity.

The question of what is proper publicity for any particular company, or for the business at large, is purely speculative, except as experience may have disclosed the effects of certain efforts in specific instances. It is a problem that would have been worthy of the wisest consideration of a well advertised ancient ruler of renown. Solomon of old was not noted for keeping his affairs to himself, and yet a great many people have been led to believe that he knew his business.

How to go about the work of publicity designed to inspire confidence and improve the business relations existing between gas companies and their millions of patrons is of great and ever-growing importance. It is a comparatively new and still somewhat strange field of labor for the financier, the miner, the engineer and the public utility expert. Experience costs money, and mistakes may be serious, if not fatal. The oldest hand tackles the job with least assurance. Every situation demands a different formula or a new plan, yet the continuous effect of all good publicity must be consistent and unvarying.

Truthfulness in Advertising

Any deviation from the exact truth in advertising or canvassing, any error in the logic or argument, any "break" that indicates ignorance of the business, is fatal or injurious to the effort. It is necessary, therefore, to place this work in the hands of those who have the faculty of understanding human nature and the wisdom to be patient with it, who are familiar with the business and competent to judge how much or how little should be said on any subject to give it proper relative importance, who have had sufficient experience and training to enable them to write clearly and expressively. Literary frills will not be needed. It is the plain statement of fact and simple argument that carry most weight and are most likely to inspire confidence in the mind of the reader.

There are various vehicles for publicity, but experience has taught many of us that the daily newspaper is the best and most economical of all in view of the result to be obtained. Practically all the large public service corporations, from the railroads down, are now using advertising space in the daily papers freely to present their aims and claims to the public.

That an increasing number of companies are pursuing this method to gain and hold public confidence, and that the amount of expenditures for this purpose is apparently growing, indicates that the effect of such publicity is worth the time and money spent upon it.

Any fixed policy of publicity, such as determines the character and cost of the work to be done, must be decided upon in advance according to the conditions that exist in the locality to be covered. Attempting to lay down permanent rules for advertising would only invite failure. To try to prepare advertising to fit different cities served by different companies under different conditions would be as futile as for a lawyer to make the same plea to every jury in every case.

If we believe that the effect of publicity is to improve our business relations with our customers, upon whom we depend for our revenues and who dictate the laws under which we must operate, then the proposition is important enough to merit our best attention in each particular case. No doubt everyone who has had experience with publicity in the public utility business could relate instances of beneficial results, but such instances are valuable chiefly as testimony in favor of the general policy and can seldom be used to the best advantage in other situations.

Newspaper an Efficient Medium

The writer has had some experience in preparing publicity matter to meet or anticipate conditions arousing or likely to arouse public complaint. In every case the daily newspaper has been sufficient as a medium through which to reach the ear of the public. In every case it has been found advisable to discard the exact forms of previous undertakings, make a new diagnosis and write a different prescription; as in medicine, much depends upon a true diagnosis. In every case the public has been found willing and anxious to hear the company's argument, though it might be directly contrary to the public opinion previously held. In every case it has been possible to make a truthful, candid, convincing statement of the company's side without exposing any mysterious inner secrets of the business. In every

case of publicity designed to improve our business relations, we have found the expenditure profitable, I make bold to assert, though this latter statement is but the opinion of one who may justly be termed a prejudiced witness.

That the public generally believes that large consumers are favored at the expense of small consumers, that it often believes the company adulterates the gas, "fixes" the meters, falsifies the bills—all this error and much more of a similar nature is an indictment against us for neglecting to look after our business relations in a proper manner.

Blaming the public for being suspicious of those things about which it knows nothing is condemning good business sense. The consuming public is neither less honest nor more honest than the producing public. If popular opinion is unfair to gas companies, if municipal restrictions are unfair, if state regulatory laws are unfair, then all this unfairness must be due to lack of information, which is only another way of saying lack of publicity. If the effect of publicity is to induce fairness in trade between individuals, it is a vital element in business life, its cost a legitimate and necessary operating expense, its neglect an evidence of poor management.

Discussion of the minor details of publicity intended to improve the business relations of gas companies and the public and to promote confidence and harmony, would not lead us anywhere in a gathering such as this. It is doubtful whether such a discussion would accomplish anything in a convention composed entirely of advertising experts. The mediums most available, the amount of money to be appropriated for the purpose, when and how to prepare copy for advertisements, the space and type to be used—all must be decided for each company according to the conditions with which it is confronted, and then left to the skill and judgment of the man who is given charge of the work.

Centralizing Responsibility

As there can be no set rules or formulas in publicity, any specified number of men may be depended upon to hold an equal number of opinions regarding the details. The leading experts in the advertising world disagree radically upon the minor points of their profession. It is useless to follow fixed forms in publicity, as it would be in personal correspondence, and good publicity work cannot be done beyond sight, hearing and touch of the local consciousness to be reached.

In important matters of finance, engineering and construction, we trust the work to the man in charge and hold him responsible. It should be so with publicity. The company's task, as in the selection of a superintendent, attorney or head of department, is to put the right man in charge. While we cannot make much progress in considering details of publicity, we can, however, give attention to certain general conditions, with a view to consistent effort to combat, correct and improve them. In this way, the continuous publicity work of local companies in their respective fields of service will be uniform, logical and cumulative in its effect, the final successful result being a changed universal opinion of the gas business as a whole. From this changed opinion the industry will have gained permanently a reasonable degree of public confidence.

This industry, in the same manner as other public utilities, is harassed and impeded because of the mistaken popular idea that small consumers are overcharged in favor of large consumers. Politicians make much of this idea and it enters, in some form, into all questions of rate regulation. It is responsible for much ill feeling among consumers of gas and makes development work and satisfactory service more difficult. It is a part of the error which must be removed by publicity before our business relations with our customers can be on a fair co-operative basis.

There are many things to be said in an interesting way on this subject through carefully prepared advertising. The records of all gas companies are now kept in such detail that analysis of consumers' accounts is easily made. It will be found, without exception, that large numbers of small consumers receive service at less than cost and that larger consumers must make up this deficit and the return on the investment. It is necessary that this fact be firmly impressed upon the public before equitable schedules of rates can become popular.

The statement that the small consumer is a losing proposition for a public utility company is generally received with incredulity in any community, which is evidence of the widespread ignorance on this point and the need of persistent publicity. There is no reason to fear the publication of facts relating to this subject, when diplomatically presented. Popular knowledge as to the relative commercial status of small and large consumers will bring about much better relations between the public and the company, and is a sound basis on which to strive for more equitable or higher rates. Public opinion is pretty decent when it feels the big fellow is getting the worst of it.

Return on the Investment

"Excessive profits" is a delicious phrase for the demagogue who mouths of millions in his attacks upon public service corporations, and the bigness of the sums involved helps to carry conviction to the public mind. Anything to which the word million may be applied has few elements of popularity in this country of free speech and democratic ideals. Reduced to smaller units, of equal truth and importance, the large figures of investment and income become more intelligible and less offensive.

It is often advisable and necessary to speak publicly of the financial affairs of a gas company. In such publicity, it is well to present a few facts as to the size and extent of the property in use whenever the amount of the investment in dollars is mentioned. Gross income and earnings appear much less excessive to the public when the number of consumers is known and the small sum which each individual contributes is calculated.

Unjust taxation becomes unpopular and indefensible when treated as a certain excess tax levied upon gas consumers for the support of the general public. Free service work, to which many companies devote attention for the purpose of improving business relations, does not produce the full results of which it is capable unless it is supported by proper publicity.

It is impossible to enumerate here the many ways in which plain facts concerning the gas business can be presented to the public with beneficial effect, but experience tends to show that all truthful, candid, seriously undertaken publicity is good, that it improves the relations existing between company and consumer, whether such relations may previously have been satisfactory or otherwise. In doing so, it assists commercial development, makes larger sales possible and aids the company in procuring reasonable prices for its product.

The term "Publicity," as applied to the gas business, is generally understood to mean the various forms of

printed matter, newspapers, periodicals, booklets, circulars, etc., which it has been customary to make use of in advertising. In that aspect, the subject has been treated here, but there are other forms of effective publicity which should not be overlooked. Good service, polite demeanor on the part of officers and employees, and making apparent by word and action the company's desire to treat the public fairly and give the most value possible for the money, will be found to help materially in establishing and maintaining the cordial relations we seek. Energetic and sincere participation in the general activities of community life is of great assistance to the manager of a distributing company. It identifies him publicly as a live one, interested in the affairs of the people, as well as his own, and goes far toward fixing the status of the company as a real and valuable citizen, ready to pull its share in the tug of war for common advancement.

Discretion in Taking Part in Community Life

Managers, heads of departments and employees of all grades may discreetly take active part in the business and social life of their cities. Membership in commercial associations, clubs and societies offers many opportunities to the public utility man for broadening and extending his usefulness and influence, provided it is not pushed to such excess as to arouse the enmity and ill will of other leading citizens ambitious in fraternal and social circles. The personal ambition of a good gas manager is circumscribed by the gas business. As a career, it has no superior in variety and intellectual exercise.

We have spoken of the necessity of local plans and policies in publicity because of the differences in conditions with which distributing companies are surrounded. Such handling of publicity undertakings is most effective, but it is possible to compile much general information relating to the industry at large and place it at the disposal of all companies for use in publicity campaigns.

Thorough Knowledge of the Business Required

The aim of publicity being to give correct information to the public, the foundation for it must be possession within the industry of correct information touching every point that has a bearing upon the character of the business relations it is desired to sustain. We have entered upon a period in public utility service that concedes the profitableness and necessity of co-operation between producer and consumer. Both must derive benefit from every legitimate transaction. Co-operation is impossible without mutual understanding, and mutual understanding can only come by transference of knowledge within the industry to those on the outside. The agency is, of course, publicity.

It is the duty of managers of gas companies to inform themselves upon every phase of popular misconception of the business. Their accountants, their engineers, their new-business chiefs can give them the facts, and their publicity department will know, or should know, how and when to make use of them.

Publicity work cannot be done effectively in a half-hearted or insincere manner. The determination to make things right must exist before it can be demonstrated. A true story must be told many times before everyone will know it.

Reputation is built upon publicity and varies as the publicity is good or bad. Publicity obtained without effort or expense is generally bad. If the gas business is to occupy its proper place in public regard, it must prepare and pay for its own publicity. Disgruntled consumers and shyster politicians constitute a poor advertising force for a gas company. Truthful publicity intercepts the existence of the one and neutralizes the other.

Our business relations with each other are founded upon such knowledge as we possess. When the average man is convinced that he is getting a square deal he is a pleasant fellow to trade with. Then the service he purchases is more valuable because more satisfactory to him, and his patronage is worth more to the one who receives it.

Points for Determining Efficiency of Accounting Department

Let me ask the following questions, and if they are answered in the negative, your accounting department is not all that it should be, and requires your further serious attention, suggested Edward C. Stothart in his paper on "Gas Company Accounting" presented at the annual meeting of the Southern Gas Association held at Roanoke, Va.

Does your accounting system serve you as the semaphore does the engineer, or as the needle does the mariner?

Have you, as the basis of your accounting, a system, the figures of which are constantly available as guides in determining your business policies?

Can you discover quickly and accurately, just where any departmental weakness is?

Can you analyze your sales records, and have an intelligent report ready on short notice, or would such an occurrence as a request for a special report mean additional clerks, and a long, costly search through a number of unwieldy records, the result being very susceptible to human fallibility?

The race for commercial supremacy is being run by progressive business men and the time is at hand when no well organized concern can afford to consider lightly its accounting department.

"Up-to-the-Minute" is the business slogan that wins in this day and age. Every business man knows that his manufacturing and sales methods must be up-to-the-minute, else he will lose in the business battle. But how about your accounting methods? Are they up-to-the-minute? You are working under a handicap if your methods in this department are not the latest and best. Here are the vital questions:

Do you know whether or not your billing and accounting methods are as error-proof as they can possibly be made?

Do you know if your accounting system eliminates all waste motion?

Do you know if your methods are as swift as possible? Their cost as low as possible?

Do you know every month exactly where you stand, in sales, gains or losses; in profits, increase or decrease; in selling expense, etc.?

Are you sure that you have utilized every modern time and cost-saving idea in this department?

If these questions can be answered in the affirmative, your accounting department is truly efficient and embodies all of the essentials necessary for the successful conduct of the organization.

All-Gas Kitchen as a Means of Releasing Labor for War Service

Many Now Occupied in Duties Gas Would Eliminate Would Help to Relieve Shortage on Farms and Other Imperative Work—Ice Man and Garbage Collector Among Those Who Could Be Freed to Other Tasks

By J. E. BULLARD

There are many very excellent reasons why the kitchens in all homes, during the course of the war at least, should be all-gas kitchens. The more gas consumed the greater the yield of the by-products so useful in the manufacture of explosives, dye stuffs, etc., which must be supplied to the soldiers at the front in ammunition, clothing and the like.

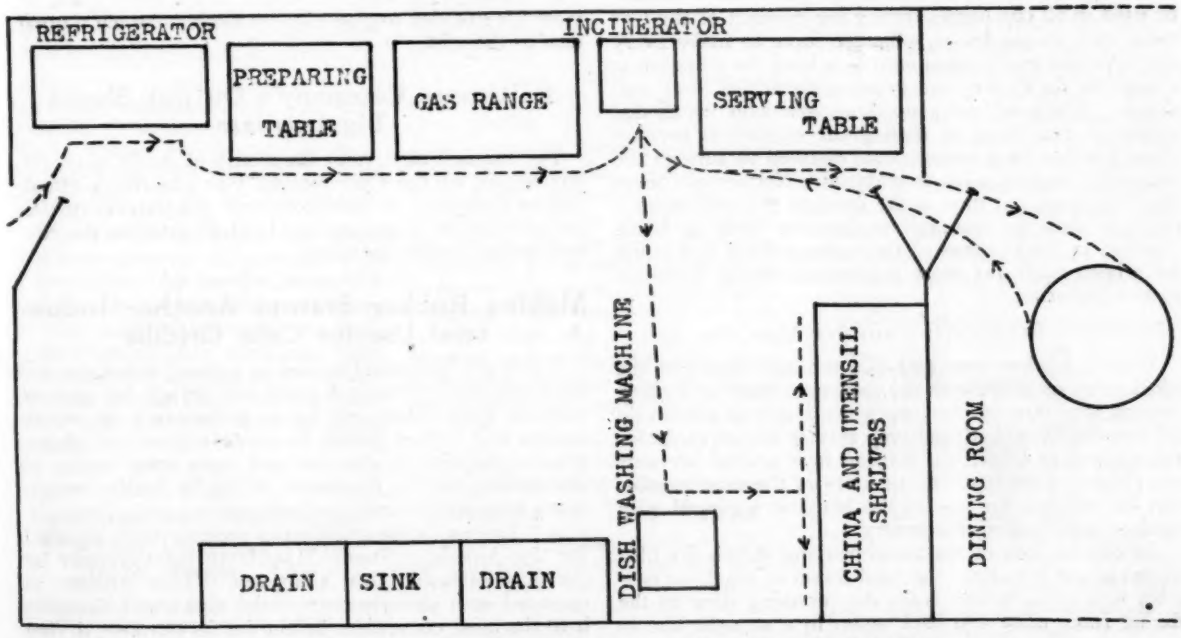
The history of this war from its beginning up to the present time indicates that the cessation of the manufacture of gas would be a greater blow to Germany than anything else of an internal nature that could happen to her. Very few fully realize to how great an extent the gas industry has enabled Germany to successfully carry on the war. In no country in the world have the by-products of this industry been developed to the extent that they have been developed in Germany. These products are used in the manufacture of explosives, dye stuffs, medicines and according to the latest reports even in the manufacture of fodder for cattle.

What has been done in Germany can also be done in America. In no other country is there as much latent talent as in these United States. Our cosmopolitan population includes some of the best brains from all the countries of the world. Already we are building up big industries to utilize the by-products of our gas works in the most effective ways. Although this work dates for the most part from the beginning of the war and the shutting off of the importation of dye stuffs from Germany it is already upon a solid foundation and there is every reason to believe that it will prove permanent and be carried on even after the war and our manufacturers again have to face the competition of the German Empire. It is evident, therefore, that the more gas used the greater will be the efficient recovery of those ingredients of the coal which will help this country most in the winning of the war.

The more coal burned in the domestic kitchen the greater the amount of these ingredients that will be irreparably lost.

As a war measure for the recovery of the chemical constituents of coal which are so vitally necessary in the manufacture of the articles required in war the universal use of gas where gas can be used appears wise. This course has proven very satisfactory in England. It has been only in those countries where the coal supply has proven inadequate where this procedure has not been deemed advisable.

Here in the United States our coal supply is abundant and it is evident that all of our allies are going to look to us for a supply of the chemicals and the products in the manufacture of which the chemicals derived from



KITCHEN ARRANGEMENT DESIGNED TO SAVE UNNECESSARY STEPS

gas works by-products are used. Every patriotic family, therefore, can be appealed to to use an all-gas kitchen and every patriotic gas man will preach the universal use of gas.

Labor Economy

It is not only in the yield of a greater abundance of gas works by-products useful in the prosecution of the war, however, that the benefit to the country lies in the use of all-gas kitchens. Modern wars do not depend alone upon the number of men that can be sent to the front. As much depends upon the number of men and women who can be set to work at home to provide the machines, ammunitions, clothing, medicines, food, etc., that must be sent to the front in order to keep these soldiers equipped with the essentials for carrying on the fighting.

The wars of to-day depend as much upon the men and the women at home as upon the men and women at the front. The day has long since passed when men could take down the old muzzle loading squirrel rifles and powder horns and be fully equipped for warfare.

The day is gone by when these soldiers were independent of the people at home and depended almost altogether upon their own resources to win the war. Wars are now fought by large business manufacturing organizations.

This indicates how necessary it is to conserve all our labor resources and place each person at that work which will prove most effective in helping the nation win the war. There is probably no place in all this great country of ours where more labor is wasted than in the average kitchen. There is also no more effective way to save a great deal of this labor than by completely equipping the kitchen with all the gas labor saving appliances now on the market. If this was done a great many workers who are now spending their times in kitchens would have all or a great part of their time released for doing work that would be far more effective than the work they are now doing.

Among the many reasons why all-gas kitchens should be used in all our homes during the conduct of the war these two should be of sufficient force to make every gas man and every consumer, to whom the situation is explained, do all they can to bring about this ideal condition. There is surely no American who wants our troops to run short of high grade explosives because there has not been enough coal distilled to furnish the necessary amount of raw material. Neither are there any who want our men at the front to go cold, hungry, or lack arms or ammunition because those at home retained in the kitchens of the country labor that could have been made far more productive on our farms or in our factories.

Eliminating the Ice Man

With a kitchen equipped like the one shown in the illustration or at least on the principles used in it many women who now employ one servant will be able to do all their work and in that way release the servants for more effective labor. In homes where several servants are employed perhaps half or more of the total number can be released for war if the home is equipped with modern labor saving machinery.

As can be seen in the accompanying sketch the idea of the layout is to have the food travel as nearly as possible in a straight line from the receiving door to the dining room table and back again in a straight line to the incinerator from which point the dirty dishes go to the dish washing machine and the dish shelves. The gas appliance equipment is as follows:

On the refrigerator which is located conveniently near the receiving or back door, to facilitate the storing of perishable food, there is mounted a gas refrigerating machine. This machine not only does away with all the dirt and muss caused by the ice man and saves labor in cleaning the floor and the refrigerator, but it releases the ice man for war service.

Next to the refrigerator we have located the kitchen cabinet where the baking is prepared and adjacent to this the kitchen gas range. Just beyond the range appears to be the most convenient location for the incinerator which eliminates the garbage can with all its extra labor and its danger of spreading diseases through the medium of the fly. Incidentally it releases another man, the garbage man, for more effective war duty than the carting of garbage.

Just beyond the incinerator is the serving table which is located as closely as possible to the dining room door. Located conveniently near the sink and the dish shelves is the washing machine.

The dotted line and arrow heads show the route taken by the food from the time the raw material enters the kitchen door till the dinner dishes are washed, dried and stacked upon their shelves. It will be noted that with the exception of the return path from the dining room table to the incinerator where all the leavings from the dishes are thrown into the incinerator there is no retracing of steps.

An attempt has been made to save every step it is possible to save. The same principle that is being applied to modern factory production is applied here.

Every kitchen cannot be laid out in exact accordance with this sketch, but every kitchen can be laid out in accordance with the principles used in it. Such an arrangement not only saves a great many steps, but causes all the gas appliances to prove more satisfactory than would be the case if a more inefficient arrangement was used.

It would seem wise, therefore, from every point of view for gas men to give efficient kitchen lay out a great deal of thought.

Baltimore Company's Output Shows Big Increase

For the first 24 days of the month of April, 1917, the gas output of the Consolidated Gas Electric Light & Power Company of Baltimore was 364,596,000 cu. ft., an increase of 51,491,000 cu. ft. over that for the corresponding period in 1916.

Making Rubber Stamps Another Industrial Use for Cake Griddle

There are innumerable uses in various industries for cake griddles. They are ideal for drying flat objects and are used extensively by manufacturers of rubber stamps and rubber goods, by manufacturers of photographic supplies, by chemists and many other trades, to say nothing of the thousands in use in hotels, restaurants, at picnic grounds and summer resorts.

A "Vulcan" cake griddle has recently been installed for the American Stamp Manufacturing Company by the Consolidated Gas Company. This griddle is mounted on a cleverly constructed pipe stand, bringing it to the most convenient height for its purpose, drying moulds.

Patents Pertinent to Gas Industry

Water Heater Placed on Top of Gas Range

Patent No. 1,217,678; described in Patent Office *Gazette*, 2-27-17, page 1253. Wallace S. Andrews, Syracuse, N. Y. Filed Apr. 24, 1915. Serial No. 23,640. (Cl. 126-53.)

This water heater consists of a flat hollow container which covers

HOLLOW CONTAINER COVERS ENTIRE TOP OF RANGE

the entire top of the range. Openings, which coincide with the burners on the range, are provided through the heater.

Gas Range Valves Equipped with Safety Attachments

Patent No. 1,217,209; described in Patent Office *Gazette*, 2-27-17, page 1087. Frederick C. Oelkers, East Port Chester, N. Y., assignor to General Gas Appliance Company, New York, N. Y. Filed Dec. 8, 1914. Serial No. 876,018. (Cl. 126-42.)

The valves operating the upper and lower burners are provided with a projecting lug on the stems. A locking strip, provided with projections adapted to engage the lugs, is so adjusted that when one valve is opened the locking strip engages the lug on the stem of the other valve and prevents it from being opened.

Continuous Distillation Used for Deriving Products from Tar

Patent No. 1,214,259; described in Patent Office *Gazette*, 1-30-17, page 1469. Johann Artmann, Essen-on-the-Ruhr, Germany. Filed Oct. 14, 1909. Serial No. 522,540. (Cl. 196-25.)

This method consists in first dehydrating the tar, then heating it to 250 deg. cent. which is above the distillation temperature of the medium weight and napthalene oils without permitting these to be distilled. The medium weight and napthalene oils are then continuously distilled off, the residue being conveyed away from the region of the distillation. These heavy oils are then continuously distilled off from this residue, conducting away from this distillation region whatever tar remains after the second distillation. The heavier volatile constituents are distilled from the tar remaining after the second distillation, the remaining pitch being conveyed away. The heat imparted to the tar before any operation takes place plus the heat remaining in the residues conveyed away from the distillation regions is sufficient to carry out the various steps in the process.

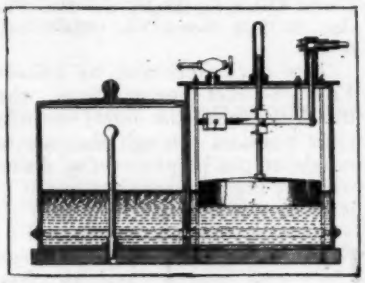
Water Heater Consists of Grooved Pipes with Gas Pipes Lying in Grooves

Patent No. 1,214,468; described in Patent Office *Gazette*, 1-30-17, page 1540. Samuel J. Hurwitz, Youngstown, Ohio. Filed March 2, 1916. Serial No. 81,747. (Cl. 122-250.)

This water heater consists of water pipes which are elongated in cross section, and which have their upper surfaces formed with longitudinally extending grooves and their lower surfaces formed with similar ribs. A gas pipe is placed in the groove, this pipe being formed to receive the rib of the adjacent upper water carrying pipe. The gas pipe is equipped with burner tips in such manner that the flames will be directed against the next upper water pipe so that the heat from the burner will envelop the water pipe.

Gas Pressure Regulator Consists of Two Tanks

Patent No. 1,218,543; described in Patent Office *Gazette*, 3-6-17, page 225. Bernhardt Mathias Gattermeir, California, Mo. Filed Apr. 25, 1915. Serial No. 93,481. Renewed Feb. 6, 1917. Serial No. 146,985. (Cl. 50-31.)



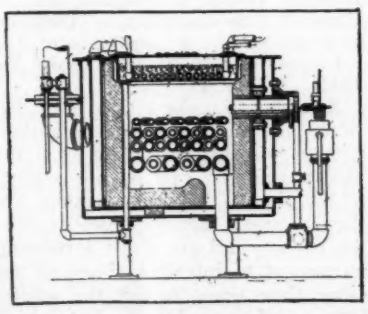
TANKS HELD TOGETHER BY METAL STRAPS

This gas regulator consists of two tanks connected together at their bottoms, being held together by metal straps. An air-tight cover is provided for one of the tanks, with a supply pipe and a service pipe entering the tank through the cover. A float is provided in the tank with a vertical rod carried by the float. A lever carrier and a counterweighted lever are pivoted to this rod, the lever operating a needle valve in the supply pipe.

Apparatus for Producing Oil Gas

Patent No. 1,218,575; described in Patent Office *Gazette*, 3-6-17, page 237. Carl O. Nordensson, Chicago, Ill. Filed Jan. 2, 1913. Serial No. 739,646. (Cl. 48-95.)

The oil gas producer consists of a closed combustion chamber of refractory material equipped with a generator coil and discharge pipe. An injector discharges oil into the coil, the oil being fed to the injector through a vaporizer for preheating the oil and an oil supply pipe. An air supply pipe is also led to the injector through the vaporizer for delivering heated air to the injector.

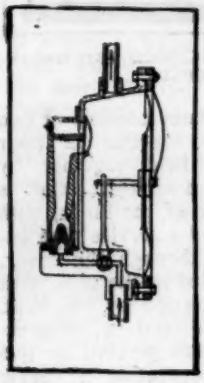


AIR SUPPLY PIPE DELIVERS HEATED AIR TO INJECTOR

Device Assures Regular Supply of Gas and Prevents Burner Stoppages

Patent No. 1,213,463; described in Patent Office *Gazette*, 1-23-17, page 1169. Gustaf Dalen, Stockholm, Sweden. Filed Apr. 9, 1912. Serial No. 689,475. (Cl. 67-87.)

This device operates as follows: From the inlet pipe gas flows, when the cock (near the inlet) is in an open position, through the injector nozzle at the bottom of the device, whereby the necessary amount of air is sucked in through holes near the nozzle. The mixture of gas and air flows through the pressure valve and into the main casing, operating to move the diaphragm closing the top of the casing upwardly against the action of the spring. The strength of this spring determines the highest pressure available. When the diaphragm is near its highest position a pin, or a post, attached to the diaphragm engages a lever which in turn closes the valve near the inlet and prevents more gas from entering. As the pressure falls another pin operates this same lever, opening the valve. This device may be used to supply gas to a number of lights and is particularly valuable when acetylene or other light hydrocarbon gas is to be used.



Pipe Joints Formed by Compressing Plastic Gasket

Patent No. 1,213,760; described in Patent Office *Gazette*, 1-23-17, page 1267. Daniel B. Dimick, Birmingham, Ala., assignor to American Casting Company, Birmingham, Ala., a Corporation of Alabama. Filed Feb. 25, 1916. Serial No. 80,430. (Cl. 137-28.)

In order to make a tight joint between pipe sections, a plastic gasket, with a portion extending into the pipe passage, is cast on one section of the piping. The pipe sections are then brought forcibly together over the gasket, and are given a rotating movement to interlock them, at the same time compressing the gasket between them. Any gasket which projects is ironed down by the application of heat to cover the interior of the joint.

Water Heater Consists of a Coil of Tubing with a Burner in the Center

Patent No. 1,216,942; described in Patent Office *Gazette*, 2-20-17, page 950. Axel S. Carlson, Los Angeles, Cal. Filed Apr. 26, 1916. Serial No. 93,762. (Cl. 126-53.)

This water heater consists of a water circulating coil formed of a series of convolutions of tubing arranged in superimposed strata. A burner is mounted within the central opening of the lower convolutions of the coil. A series of grate members are placed over the coil and a cylindrical housing extends downward from the grate members and partially encloses the coil. A baffle plate is mounted over the lower open end of the housing and has a central opening which coincides with the heat burner. Heat is deflected downward to the coils when a utensil is placed upon the grate.

Flow of Gas to Flues Controlled by Hinged Members

Patent No. 1,213,988; described in Patent Office *Gazette*, 1-30-17, page 1376. Louis Wilputte, New Rochelle, N. Y. Filed June 19, 1916. Serial No. 104,377. (Cl. 202-9.)

The coke oven has vertical heating flues and a horizontal passage into which the upper ends of the flues open. Hinged members arranged to swing into position, close the flues and restrict communication between the flues and the passage.

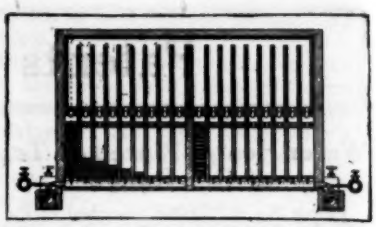
Toaster is Equipped with Folding Supports

Patent No. 1,216,525; described in Patent Office *Gazette*, 1-20-17, page 809. Charles A. Williams, Seattle, Wash. Filed Oct. 14, 1916. Serial No. 125,573. (Cl. 254-137.)

This bread toaster is provided with a perforated base, on which are mounted wire supports for holding the bread. These supports engage each other at the top, but may be disengaged and folded on to the base when not in use.

Coke Ovens have Flues Connected Together at Ends

Patent No. 1,212,865; described in Patent Office *Gazette*, 1-16-17, page 925. Louis Wilputte, New York, N. Y. Filed July 31, 1912. Serial No. 712,377. (Cl. 202-9.)



SEPARATE AIR INLET PROVIDED FOR EACH REGENERATOR

This coke oven structure consists of coking chambers with a number of heating flues, with an individual regenerator connected to one end of each of the flues. The flues are arranged in sets, each comprising a number of flues connected together at their ends, remote from those to which the regenerators are connected. A flow of air is alternately passed in opposite directions through the flues and regenerators for conveying waste gas away from the regenerators. A separate air inlet is provided for each regenerator.

Water Coils Held to Casing of Automatic Water Heater

Patent No. 1,217,133; described in Patent Office *Gazette*, 2-27-17, page 1062. Charles A. Backstrom, Crafton, Pa., assignor to Pittsburgh Water Heater Company, Pittsburgh, Pa. Filed June 24, 1915. Serial No. 36,012. (Cl. 122-250.)

The support for each of the sets of double spiral water coils in an automatic water heater consists of a ring secured to the case by lugs cast thereon. These rings are open on one side and engage the lower side of the central turn of the coil, and are also provided with fingers which project in a downward and inward direction for supporting the lower turn of the coils.

Apparatus for Moving Conveying Bridge

Patent No. 1,213,323; described in Patent Office *Gazette*, 1-23-17, page 1119. Charles S. Williamson, Chicago, Ill. Filed Dec. 1, 1915. Serial No. 64,591. (Cl. 105-223.)

This car is the support for one end of a coal conveying bridge, the power for moving the bridge being applied at this point. A motor is mounted on a frame between the wheels, a worm gearing being provided on each end of the motor shaft. These worm gearings in turn engage worm wheels, which transfer the rotating motion to the propelling wheels by means of pinions secured to the shafts on which are the worm wheels.

Publications

Parsons Excavating Equipment—Describes Labor Saving Machinery

Loose-leaf catalog, binder size, 9 in. x 12 in., each section containing description of one model of machines made by The Parsons Company, Newton, Ia.

A very complete story of the building up of the manufacturing methods and the development of machine shops to their present standard is given in the first section of the catalog, which is bound to the attractive cover.

Each of the additional sections is an insert and is devoted to the description and performance of one of the many Parsons models of trench excavators and backfillers. The entire edition is profusely illustrated, and the dark green ink gives a splendid artistic effect.

One of the cost comparisons is of special interest to the hesitating gas man, and bears reprinting:

"Basing a comparison on the fact that a member of a hand gang will remove 10 cu. yds. in 10 hours, oftentimes an impossible total, and that the average performance of the Parsons machine under the supervision of a competent foreman and engineer, is 45 cu. yds. per hour, it will be seen that the machine will replace 45 laborers."

"According to the above figures, 200 operating days per year, 5 per cent. for repairs, 6 per cent. interest, and 15 per cent. depreciation, the following result will give an idea of what these machines will save in dollars and cents:

HAND WORK

Foreman, per day	$ 4.50
Timberman, per day	3.50
Helper, per day	3.00
Pipe Layer, per day	3.50
Helper, per day	3.00
Forty-five Laborers, per day	123.75
	$141.25

MACHINE WORK

Engineer, per day	$4.50
Fireman, per day	2.75
Fuel, per day	5.00
Oil and Waste, per day	.50
Water, per day	.50
Team, one-half time, per day	2.50
Foreman, per day	4.50
Pipe Layer, per day	3.50
Helper, per day	3.00
Timberman, per day	3.50
Helper, per day	3.00
Interest, Depreciation and Repairs, per day	10.00
	$43.25

Lectures on Illuminating Engineering Soon to Appear in Book Form

The lectures on illuminating engineering delivered at the University of Pennsylvania, under the joint auspices of the University and the Illuminating Engineering Society in September 1916, are to be published in book form on or before July 1, 1917.

A special arrangement has been made by which these books are available to the members of the Illuminating Engineering Society, the Faculty, Alumni and Undergraduate Body of the University of Pennsylvania at a special price of $4.00 postpaid, on prepaid orders received not later than July 1, 1917. The book may be obtained at the regular price of $5.00 after publication, and at $4.00 only on the special advance orders from persons affiliated with either of the two institutions.

England's Railroad Preparedness

Franklin K. Lane, Secretary of the Interior, Tells of Uniting of English Railroads Into One System—Believes in Co-Operation Rather Than Compulsion for This Country

England at the beginning of the war was prepared in one respect at least, that is, in respect to her railroads. The minute war began the government took over the railroads, upon an extremely simple plan; viz., that they should be paid the amount of net revenue per annum that they had received in 1913. Then the railroads were tied together. Unnecessary terminals and yards were eliminated. Things were so disposed as to unite all the railroads of England into a single system. I was surprised, said Secretary Lane in his address at the organization of the Coal Production Committee of the Council of National Defence, in talking to Mr. Thomas, a member of the British War Delegation, a Member of Parliament, and president of the Railroad Men's Union over there (and that is an organization of 400,000 men), to learn what has resulted. Mr. Thomas told me that, notwithstanding the fact that the government pays nothing for the transportation of troops, munitions, or actual war material, business had so increased, and the economies created were so great, that after paying the 1913 revenue to the railroads, the government was making money out of the operation of the roads.

War is now an industrial game; and the foundation of industry, as you know it now, is coal.

And so it is that you are at the very root and foundation of the great war industry. Unless we have an abundance, or at least a sufficiency of coal, war cannot be carried on.

Now there are two ways of dealing with a problem of this kind. One way is by the hearty co-operation of the men already engaged in the industry. The other way is by compulsion. My experience in the Interstate Commerce Commission led me to believe that the larger men in the railroad industry had quite as much as I had, and if I could show them the importance of an occasion they would try to meet it. So, instead of resorting to compulsion, instead of taking over mines and great operating plants, we are endeavoring to put you men to your best.

What do the railroads expect to do? They have gathered the executives of 250,000 miles of railroad, and have organized them practically as a single unit. They have brought them together upon the theory that the committee of five should handle them as one system, insofar as service is concerned.

The Railroad Committee will work with you in all earnestness. There should be no such thing as empty car movement; they should take off some passenger train locomotives to put into freight service; they should appeal to the patriotism of the public and cut down the demurrage time; and generally institute such reforms as to give the greatest possible service to the country.

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Postponing the Conventions

Both National and various State and sectional associations have postponed their annual conventions either definitely or to such times as conditions may warrant their resumption. That such action is wise cannot be gainsaid.

Responding as they are, and will, to the call to National service and to an increased demand for gas and the derivatives necessary to the conduct of war, our working organizations will be mere skeletons of what they would be in normal times. Valuable though the advantages to be gained by the attendance of members of the various company organizations at the conventions unquestionably are to the industry, in the opinion of this journal, and apparently in the minds of the boards of directors of the associations, they are not of sufficient value to outweigh the demoralization that would ensue from the absence from their work of a large number of men.

Minimizing the Effect of Convention Postponements

Few are unaware of the advantages of periodical gatherings in any industry. The gas association conventions serve a very useful purpose. Their suspension unquestionably will have an adverse effect upon the development of the industry. It is conceded that the disadvantages to the industry as a whole of holding them outweigh the advantages, but it must also be recognized that the various notices of postponement sent out mean more than merely the loss of an opportunity to get together and gossip.

With nothing to take the place of the conventions, with nothing to provide the means of exchanging thought and suggestions throughout the industry they provide, there would indeed be a loss.

Under existing conditions the gas industry must for its own best interests make fuller use of its journals. The suggestions and information that would ordinarily be imparted by word of mouth at conventions must find their medium through the printed page. The discussions hitherto carried out on the convention floors must be carried out in the columns of the journals. In brief gas men must talk to each other through their journals, else much will be lost.

Is the Work Already Done on Convention Papers to be Wasted?

Convention postponements have come after considerable work has already been done by papers committees and by the authors selected in preparation of the various programs. Is all this valuable work to be lost?

The papers are designed to furnish information on subjects bodies of specialists consider the industry needs information on. Steps should be taken to insure that it may not lack it through the convention postponements.

THE AMERICAN GAS ENGINEERING JOURNAL offers the suggestion that the papers and discussions be called for by the various associations just as if the conventions were actually to be held and that they be sent to the gas journals for publication over the various author's names and credited to the association from which

they come. Then, that they be published by the associations in bound volumes as hitherto.

This journal freely offers its columns for such purposes. Further it invites the officers and boards of directors of the various associations to make such use of its pages as may seem desirous to them for the furtherance and continuance of association activities.

Backing Up Words with Deeds

Some time ago the directors of the National Commercial Gas Association wholeheartedly offered the President the association's support in the existing emergency. This action in itself was commendable, but words without deeds are valueless.

But that their words were not mere empty phrases the directors have emphatically demonstrated by voting two thousand dollars and the assistance of the association in attacking a very vital problem. The value of the service is enhanced by the intelligence shown in the selection of the point of attack.

In putting the association's support and efforts behind the campaign to educate the people of the country to can the surplus produce from the garden movement that has swept the country and in which the gas industry is doing its part, they have taken the first steps towards a service of immeasurable value. Experts tell us that left to the effects of nature half of these products would rot and be wasted lacking immediate consumption. This, too, at a time when many tell us we are threatened with a world famine. Canning will preserve the surplus fruits and vegetables to food uses.

The directors of the National Commercial Gas Association have scored a distinct achievement. Almost prophetic now seem the words printed in these columns on the event of the association's annual convention last November: "Each year more and more is expected of the National Commercial Gas Association. Each year it has fulfilled these expectations, and there is little reason to doubt that the results of the ensuing year will be different in this respect than those which have preceded it." The directors of the National Commercial Gas Association have been confronted with an emergency; an opportunity to be of real service to the Nation in a time of need, and they have promptly found their course. The effects of their action will be felt by the gas industry long after its results have become history.

Better Employees Through Better Health

A mediocre employee in perfect health may well be more productive in the year's total than a brilliant employee in medium health.

"A half hour's exercise in the garden before breakfast, or before the evening meal, is a form of recreation which beats any spring tonic ever prescribed," states a gas company manager in explaining his company's reasons for encouraging gardening among its employees. Thereby he presents, in itself, a very substantial reason for other companies to do likewise.

A very large part of gas company employees get far too little fresh air. The hours of some of them are long and their days are arduous. To get them to take the exercise in the open air an inducement is required.

Keeping living expenses somewhat in proportion to earnings is a form of inducement whose influence can scarcely be magnified. Planting and raising his own vegetables is a means of so doing that will instantly be clear to any employee who is capable of thinking. The thought that he is thereby doing a service to the Nation is an added incentive.

Allot to the employee a strip of ground, encouraging him by having it, in conjunction with other strips, plowed, and give him the seeds, and it is highly unlikely that he will fail to respond.

None of these measures should cost the gas company a very great expenditure. And what is spent in this manner will be returned with interest in healthier, therefore, more efficient, employees, and, perhaps, in averting some future demand for increased pay.

The Liberty Loan—An Opportunity to the Gas Man who Must Continue at the Task in Hand

An opportunity for National service and, at the same time, to effect a good stroke of business is presented to those gas men—and there are many—who will render their best possible service to the Nation by simply continuing at the task in hand, in the Government Liberty Loan Issue.

Looking at the matter from a purely practical standpoint it represents a means of so placing our savings—our "rainy day" funds—so that we are absolutely certain they will be there when needed, at a rate of interest that is equal to the usual savings-bank rate. And savings banks have failed with consequent loss to depositors. We have no brokerage fees to pay, and the return is free from income tax. If the war continues for a long period subsequent issues may draw a higher rate of interest. These bonds being convertible to such bonds at a higher rate, the earlier investor will benefit by such increases. When the war ends there can be little doubt but that these bonds will attain a premium thus giving holders what may be termed an unearned increment.

Bought on the Government's terms they are easy to acquire. One can buy them by simply setting so much aside for a number of months. Banks and brokerage houses have made it even more easy by selling them on the partial payment plan giving the investor at least eight months to complete his purchase.

Money plays a paramount part in the successful waging of war. A spontaneous, overwhelming subscription to this issue will have as great or greater adverse effect on the enemy's morale as the loss of a division. Much can be done with two billion dollars. A hundred per cent. over subscription would make known to the enemy powers that an equal amount was held ready to snap up the next issue; truly a dismal prospect to an enemy wearied by three years of terrific warfare and in such financial straits that its legislators declare in open forum that a huge indemnity—for the crime the world committed in declining to be trodden under his heel—is absolutely essential to save him from bankruptcy. Incidently eyes are turned towards this country as the source of such indemnity, which prompts the thought that it is better to pour forth our funds now in the form of loans with interest attached, rather than later, perhaps, in taxes with no interest to subsidize "kultur" rampant.

There should be a large subscription to the Liberty Loan in the gas field. It is one means by which the individuals of the industry can do their part in the National service.

News of the Gas Industry

To Mobilize Public Service Men and Prevent Crippling of Service at New York

A plan for mobilizing the employees of all the public service corporations of New York was partly formulated at a meeting held at the office of the Public Service Commission, 120 Broadway, May 17. A part of the plan is to fix upon those employees who should remain at their tasks rather than join the army. The employees of the gas, electric light, and traction services of the city are not to be permitted to go into the military service to an extent that would interrupt those utilities. The public service commission was to suggest the appointment of a committee to serve for the duration of the war to see that the right number of right men are kept in their places and at the same time furnish skilled men to the army for particular duties.

Indicative of the scope of the movement, Chairman Straus of the commission issued a statement to the public service corporations of New York City in which he called attention to the necessity of continuing the performance of certain duties to the people of the city during the war. Not only that, but he said that a system should be perfected by which highly skilled men should not be wasted in work that an unskilled man could do as well. In his statement Mr. Straus said:

"It is highly desirable that the various public service corporations should at once advise their employees that the national welfare is also vitally dependent upon the continuance of the functions of public utilities, and that while a patriotic impulse and a spirit of self-sacrifice may prompt such employee to enlist in the army or navy, in reality he might thereby be taking a step which would be disadvantageous to the best interests of the country which may require that he continue in his present employment.

"Public Service employees who may at this time contemplate giving up their duties in order to volunteer for military service should, therefore, first take the matter up with their employers, who, through a committee to be created, will be in close touch with the requirements of the Government. This course is necessary in order that the nation as a whole may direct its energies and coordinate its activities in a way that will insure the most effective cooperation with our allies in the prosecution of the war."

Speeches approving the scheme were made by George B. Cortelyou, president of the Consolidated Gas Company; E. A. Maher, Jr., vice-president of the Third Avenue Railroad Company; J. W. Lieb, vice-president of the New York Edison Company, and Commissioner Travis H. Whitney. The following Executive Committee was named:—

J. W. Lieb, New York Edison Company: Walter R. Addicks, Consolidated Gas Company; George Keegan, Interborough Rapid Transit Company; E. A. Maher, Third Avenue Railroad Company; J. J. Dempsey, Brooklyn Rapid Transit Company; F. H. Thurber, New York Telephone Company; J. H. Jourdan, Brooklyn Union Gas Company, and Wilbur Fisk, Hudson and Manhattan Railroad Company.

Chairmen of sub-committees were named as follows:—

Co-ordination of Utility Services —George Keegan. Materials and Supplies—W. R. Addicks. Relation of the Utility Companies and Their Employees to the National Government—J. W. Lieb. Relations with the Authorities and Protection of Plant and Property—Travis H. Whitney.

Washington War Conference Fears Coal Famine

The coal situation is so threatening, declared James J. Storrow, chairman of the Public Safety Committee of Boston, upon his return from the Washington war conferences, that if shipments from the Pennsylvania mines are stopped the Massachusetts factories will close.

He said that unless Massachusetts gets a plentiful supply of coal this summer there will be an actual famine next winter.

"Three suggestions have been made that the Federal government would take over the shipping lines between Massachusetts and the coal states," Mr. Storrow said, "thus far we have been able to prevent this."

The American Gas Institute Postpones Regular Annual Meeting—Calls Special Meeting for June 12

A notification has been distributed recently by George G. Ramsdell, secretary of the American Gas Institute, which tells of the decision to postpone the annual meeting, due to the entrance of the United States into the war, an action which has been taken by a number of the national societies. The complete notice follows:

May 17, 1917.

To the Members of the American Gas Institute:

At the suggestion of a number of the prominent members of the Institute the question of the advisability of holding the regular annual meeting beginning on the third Wednesday of October, 1917, at Washington, was considered by the Directors at the meeting held May 10th. After a long and earnest discussion it was decided that in the opinion of all those present the conditions brought about by the entrance of the United States into the War made it inadvisable to hold this annual meeting and it was voted that the proper steps be taken to have it postponed indefinitely.

At the same time it was the opinion of the Directors that it would be to the advantage of individual members and of the Institute in general to have, at as early a date as possible, a meeting for the discussion of the conditions and problems affecting the gas industry arising from the state of war. To accomplish this object a resolution calling a special meeting was passed as follows:

"That a special meeting of the Institute should be held in New York during the week of the eleventh of June, at a time and place to be decided upon by the President and Secretary. The business to be considered at this meeting to be the problems arising out of the present war emergency."

In accordance with this resolution you are hereby notified that a special meeting of the Institute

will be held in the Assembly Room, fifth floor of the Engineering Societies Building, 29 West Thirty-ninth Street, New York City, beginning at 10.30 A.M., June 12th, continuing for that day and possibly for another day. The business to be transacted at this meeting will be the consideration of problems arising out of the present war emergency.

To aid your officers in making arrangements for the meeting please return immediately the inclosed postal, properly marked, dated and signed with address.

GEO. G. RAMSDELL,
Secretary.

A return postal was enclosed with the notice, in order that a fair estimate of the expected attendance might be obtained.

Home Canning and Preserving—A Nation-Wide Campaign for Conservation of Food Supply

Co-operation of Every Gas Company in the Country Needed to Stimulate Action and Bring Big Success

Gas companies throughout the country are taking stock of the position in which they find themselves, with the raw materials for gas,—coal, oil, labor,—advancing steadily in cost. They realize how necessary it is that they should secure an immediate increase in their sales of gas if they are to offset the extra expenses they must bear. However, any increase in sales must be accomplished with a minimum expenditure of capital and at maximum prices for the product. Therefore, the Board of Directors of the National Commercial Gas Association has appropriated a sum of $2,000 to underwrite and start a national campaign for home canning and preserving.

Gas is the ideal fuel for cooking fruits and vegetables and it can confidently be assumed that, among the twenty million gas consumers of the United States, a campaign of the magnitude and character here outlined will bring about an increased consumption of gas in the household amounting to at least 25 cents per month per consumer, on the average. Between June and November, this will mean an increase in revenue of twenty to thirty million dollars for the gas industry.

Furthermore, the impetus to the use of gas in the household will pave the way for a more general introduction of domestic gas-burning appliances. Gas managers will realize that once the habit of home canning and preserving of fruits and vegetables is revived on a large scale, its force will continue to be felt for many years. By participating in this campaign, gas companies are not merely boosting sales over a short period but are encouraging a feature of home economics that will influence gas business for an indefinite stretch of time.

The gas company that co-operates in this National campaign is co-operating with the Government and is showing its patriotism in a tangible manner.

As one of the Allies, we must feed not only ourselves, but a large part of Europe. A serious food shortage is so imminent that every effort is being made by the Government and the people to supply help to the farmers and to utilize all unused ground for gardens. A complement of these efforts is the preserving and canning through which means 50 per cent. of the food raised can be saved from the usual waste. Hence the Department of Agriculture is preparing a national and intensive campaign to prevent food waste and to arouse a patriotic movement for food conservation.

The gas companies have before them during the next six months a most wonderful opportunity for co-operating with the Government in its efforts to stimulate the American housewife to can and preserve the nation's surplus fruit and vegetables.

The N. C. G. A. has outlined the campaign for gas companies and the Board of Directors has approved the plan. Now it becomes the duty of every gas company to give the association its fullest support. It is in fact imperative that the companies immediately declare the extent of their co-operation and commit themselves definitely for a quantity of the materials by which the propaganda will be spread—posters, folders, and general literature which the association is preparing.

Remember that this is to be, not merely a nation-wide gas campaign, but a National campaign, in which the Government, the women's magazines, the farmers, grocers, produce dealers, sugar and glass manufacturers are also participating.

ELEMENTS OF THE PLAN

The National Commercial Gas Association is prepared to offer the following service to gas companies:

Display posters. The country is to be literally flooded with posters. Each month will bring out a new one, from June to November, each featuring a different fruit or vegetable according to the season. Attractive to the highest degree, the work of a famous artist, Mr. Carter Housh, these cards are to measure 28x41 inches and to be printed in four or five colors. The plan requires that each gas company secure a supply of the posters every month and display them:

(1) In the gas company's windows and show rooms,

(2) On the gas company's delivery wagons and trucks,

(3) In the windows of various merchants,

(4) On the delivery wagons of these same merchants, etc.

The cut herewith gives the design of Poster 1. The widespread publicity to be given to the whole campaign, the advantages that will accrue to grocers, glassware dealers, department stores, produce and fruit merchants in the sale of both food products and necessary accessories for canning and preserving, as well as the patriotic appeal will make dealers willing to display the posters which the gas company will supply.

Monthly Folders. One of the most important elements of the publicity the association has planned is a series of six folders. These have been outlined and will be written by Mrs. Ida C. Bailey Allen, Editor of the "Housewives' Forum" in the Pictorial Review. Mrs. Allen is the author of "Mrs. Allen's Cook Book," a lecturer at Redpath, Chautauquas and Westfield Domestic Science Schools, and formerly editor of "Three Meals A Day" Good Housekeeping. Mrs. Allen will include in her plan instructions to housewives on how to use gas in the processes described. The following outline is tentative merely and will be elaborated as the folders are prepared:

FOLDER NO. 1—FOR JUNE.

Short introduction on canning and preserving and the use of gas for this work.

From twelve to fifteen recipes for canning and preserving June products.

Canned Vegetables. To include spinach, dandelions, asparagus, and peas.

Canned Fruits. To include strawberries by two methods, plain rhubarb, baked rhubarb, and pineapple.

(*Continued on page* 526)

Lively Interest Centers on Exhibits at Twelfth Annual Convention of the Natural Gas Association of America, Held at Buffalo

Joseph F. Guffey Re-Elected as President for Coming Year—Papers Contain Facts for Artificial Gas Man as Well as Natural

The Broadway Auditorium, Buffalo, N. Y., was a beehive of activity on the occasion of the opening of the three days' convention of the Natural Gas Association of America, in connection with 150 exhibits of the Allied Association of Natural Gas Supply Men from all parts of the United States and Canada.

At 9 a. m. Monday morning the registration booth opened at the Broadway Auditorium, and at the close of the convention the attendance registered almost 1,000.

The program was followed fairly closely throughout the entire convention, and at noon Monday a luncheon was provided by the Association of Natural Gas Supply Men in the Exhibit Hall for all members wearing badges. In the evening a smoker and cabaret was held in the main ball room of the Hotel Lafayette.

The meeting was called to order Tuesday a. m. by President J. F. Guffey, and an address of welcome was given by Louis P. Fuhrmann, Mayor of Buffalo, while the response was made by John M. Gerard, general manager of the Ohio Fuel Supply Company.

The reports of the Board of Directors, Secretary and Treasurer, Committee on New Members, and Auditing Committee, were favorably received.

After the president's address, which was extremely interesting, a paper was presented by John W. Lansley, secretary of the Southwestern Gas & Electric Company, Chicago, Ill., on "The Effect of Publicity on Business Relations." "Co-operation Between Buyer and Seller of Natural Gas Supplies" was a paper prepared by the Board of Directors of the Association of Natural Gas Supply Men, and was read by Larmour Adams, secretary. Both of these papers created much favorable comment and contained many good suggestions.

In the afternoon a trip was made to Niagara Falls and the Gorge Route, where the convention photograph was taken.

One of the special features of the convention was a very timely address given by A. C. Bedford, president, Hope Natural Gas Company, Pittsburgh, Pa., on "The Mobilizing of the Industry for War."

On Tuesday evening the Exhibition Hall was opened to the public and some very good music was provided by the Iroquois Natural Gas Company of Buffalo.

At the Wednesday morning meeting Leslie B. Denning, president of the Lone Star Gas Company, gave his opinion on "Rates." A. B. Macbeth, general manager of the Southern California Gas Company read a paper on "Mixed Artificial and Natural Distribution in Cities." Both were well received.

After some interesting discussion, T. R. Weymouth, chief engineer of the United Natural Gas Company, gave a paper on "The Efficiency in Operation of Gas Comprising Stations."

One of the annual events which was enjoyed by many of the members was the Beefsteak Dinner given in the Banquet Hall of the Broadway Auditorium.

Two papers were given on Thursday morning before the election of officers—one by A. R. Gray, assistant to general superintendent, of the Peoples Natural Gas Company, on "Deep Well Drilling," and the other by James Aston of the A. M. Byers Company on "Wrought Iron Pipe for Use in the Natural Gas Field," which brought out several opinions.

Reports on several committees were heard, and then the following officers were elected for the coming year:

President Joseph F. Guffey, Pittsburgh, Pa.; vice-president, Kay C. Krick, Columbus, Ohio; secretary-treasurer, Thomas C. Jones, Delaware, Ohio. Directors: Bert C. Oliphant, Buffalo, N. Y.; Alfred Hurlburt, Kansas City, Mo.; James C. Duffield, London, Ontario; Arthur Booth, Pittsburgh, Pa.; Fred P. Grosscup, Charleston, W. Va.; Ogden K. Shannon, Fort Worth, Tex.; John H. Maxon, Muncie, Ind.; Clifton W. Bears, Wooster, Ohio; Harris J. Hoover, Cincinnati, Ohio; Glenn T. Braden, Tulsa, Okla.; Andrew A. Armstrong, Pittsburgh, Pa.; James W. McMahon, Toledo, Ohio.

The next meeting will be held at Louisville, Ky., May 21, 22 and 23, 1918.

Conscription Bill Passed and Day of Registration Set

The President, after signing the selective army draft bill, appointed June 5 as the day upon which the young men of the country between the ages of twenty-one and thirty must present themselves for registration.

Several points in the President's proclamation which are vitally important to all men are here abstracted to insure a better understanding:

"Whereas, Congress has enacted and the President has on the 18th day of May, one thousand nine hundred and seventeen, approved a law which contains the following provisions:

"Section 5.—That all male persons between the ages of twenty-one and thirty, both inclusive, shall be subject to registration in accordance with regulations to be prescribed by the President, and upon proclamation by the President or other public notice given by him or by his direction stating the time and place of such registration it shall be the duty of all persons of the designated ages, except officers and enlisted men of the regular army, the navy and the National Guard and Naval Militia while in the service of the United States, to present themselves for and submit to registration under the provisions of this act; and every such person shall be deemed to have notice of the requirements of this act upon the publication of said proclamation or other notice as aforesaid given by the President or by his direction; and any person who shall wilfully fail or refuse to present himself for registration or to submit thereto as herein provided shall be guilty of a misdemeanor and shall, upon conviction in the district court of the United States having jurisdiction thereof, be punished by imprisonment for not more than one year and shall thereupon be duly registered, provided that in the call of the docket precedence shall be given in courts trying the same to the trial of criminal proceedings under this act.

"Provided, further, that persons shall be subject to registration, as herein provided who shall have attained their twenty-first birthday, and who shall not have attained their thirty-first birthday on or before the day set for the registration, and all persons so registered shall be and remain subject to draft into the forces

hereby authorized, unless exempted or excused therefrom as in this act provided;

"Provided, further that in the case of temporary absence from actual place of legal residence of any person liable to registration as provided herein, such registration may be made by mail under regulations to be prescribed by the President.

"Now, therefore, I, Woodrow Wilson, President of the United States, do further proclaim and give notice to all persons subject to registration in the several states and in the District of Columbia, in accordance with the above law, that the time and place of such registration shall be between 7 a. m. and 7 p. m. on the fifth day of June, 1917, at the registration place in the precinct wherein they have their permanent homes.

"Thus, though a sharpshooter pleases to operate a triphammer for the forging of great guns and an expert machinist desires to march with the flag, the nation is being served only when the sharpshooter marches and the machinist remains at his levers. The whole nation must be a team in which each man shall play the part for which he is best fitted."

Chicago Company to Pay Dependents

Employees of the Peoples Gas Light & Coke Company who enter the military service of the United States are to receive monthly payments for the benefit of dependents, under a plan just announced. Each married man will get $30 a month for his wife and $10 for each child. In special cases, where employees are unmarried, the money will be paid to other dependent relatives. This plan will be in effect until Aug. 1, when a permanent arrangement will be adopted.

Iowa District Gas Association Convention Postponed

In line with the action of several other organizations, the Council of the Iowa District Gas Association decided to indefinitely postpone the convention that was called for May 22-23, 1917, because of the unsettled condition of national affairs.

Should the situation clear up and conditions throughout the country quiet down, it is probable that a meeting will be called later in the year. Otherwise there will be no meeting until the regular session in 1918.

Grip of Teeth Holds New Respirator in Place

Extremely Light in Weight and Easy to Adjust—Metallic Hose Connects User to Pure Air Supply

A respirator and inhaler consisting of a small hard rubber case, enclosing one inlet and one outlet valve and with two aluminum connections leading from the bottom, one exhausting to any desired point, the other connected to a 3/8 in. hose, leading to the fresh air supply, which has been invented and put on the market by F. J. McSpirit, of 134 Wayne Street, Jersey City, N. J., has been tried out with marked success by a large Eastern gas company.

From the top of the case, two connections lead to the nose making a perfectly tight joint with each nostril. There is also another connection which is held between the teeth,

SHOWING RESPIRATOR AND HOSE CONNECTION

like a pipe, the weight without the hose being only 3 oz.

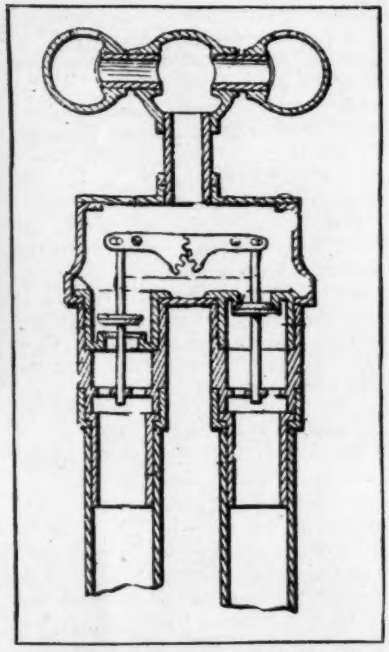
The nose piece is adjusted to fit the nostrils tightly, and the mouth piece is placed between the teeth. One can determine if the nose piece is tight by holding the thumb over the end of the hose and trying to breathe, the nose piece being adjusted until it is impossible to breathe. This

READY TO ENTER POISONOUS OR UNHEALTHY ATMOSPHERE IN SAFETY

requires a little *patience at first*, until one is familiar with the device. When the adjustment is satisfactory the operator may proceed with perfect safety.

A desirable feature of this device is the fact that the operator can use it for a long period of time, without feeling any fatigue from breathing in this manner.

The operator may if he please,



CROSS-SECTION SHOWING OPERATING DETAILS

breathe entirely through the mouth piece, the nose connection being removed and its opening corked up, or vice versa, he may cork up the mouth piece and use only the nose piece.

The respirator will conserve the health of an employee and enable him to do more and better work, to his as well as his employer's advantage.

The life of the respirator is indefinite, its maintenance almost nothing and its cost reasonable, when the usefulness and value is considered.

An engineer of the company which has adopted the device recommends it as follows:

"This is doubtless the most ingenious and practical apparatus known for protecting workers in poisonous and other unhealthy atmospheres.

"It has given thorough satisfaction when tested in atmospheres containing gas, smoke metallic, dust, acids and alkalies and other dangerous fumes, such as are found in gas, chemical, cement, iron and dye works, etc. It has been used successfully in diving work."

N. C. G. A. Convention Postponed as War Measure

The following notice has appeared directed to the members of the National Commercial Gas Association:

Because of the direct participation of the United States in the world war, the business of public service institutions has already been affected to a considerable extent.

Many of our members have enlisted in the service of our country, while many others have signified their intention of doing likewise. Naturally, the officers of your Association are highly gratified at this evidence of loyalty to America.

But there is also necessity for home duty and those members of the National Commercial Gas Association who necessarily must remain at their posts, can render an equally important and patriotic service. Factories and munition plants must be kept going; streets and homes must not be neglected. The wheels of commerce must continue to revolve. Without light, heat and power, which you supply, even necessary activities will surely be suspended. Therefore, your principal duty in this crisis is to furnish heat, light and power sufficient for the public welfare. Remember, they are as indispensable as food and clothing. Your task, under prevailing conditions, is not an easy one but you will be helped if you keep constantly before you, the ever heartening thought, so clearly expressed in familiar words:

BUSINESS GOING ON AS USUAL DURING ALTERATIONS.

Because your President and Executive Committee feel that every member should remain at his post of duty, ready and willing to serve the public needs, we have deemed it advisable to pass the following motion:

"Be it moved, in view of the fact that these United States are in a state of war and that as loyal citizens of our country we see our first duty as active workers either in military affairs or at the post we now occupy, that the annual Convention of the National Commercial Gas Association, scheduled to take place in November, 1917, in the city of Detroit, Mich., be postponed until some future time, to be determined at a later meeting of the Board of Directors."

The Board regrets very much being obliged to dispense with the annual convention but believes that we are serving the best interests of our country and of our Association in so doing.

In the meantime, your President and Executive Committee will look closely after the affairs of your Association and will devote their best efforts to its interests. Your duty is to keep "business moving as usual, while alterations are going on."

JAMES T. LYNN,
President, National Commercial Gas Association.

An Ordinance Prohibiting the Sale of Other Than Approved Tubular Connections for Illuminating Gas Fixures

An asphyxiation, resulting from the use of a piece of paper tubing started an investigation by the city officers of Newark, N. J., on the subject of gas tubing. So much of what was considered unsafe tubing was found being used and offered for sale, that a city ordinance was considered the most effective manner of regulation and the following was put into effect:

BE IT ORDAINED by the Common Council of the City of Newark, as follows:—

Section 1. That it shall be unlawful for any person, persons, firm or corporation to use, sell, expose or offer for sale, to install or affix, in the City of Newark any tubular connection or fabric intended for any illuminating gas fixture, stove, heater, or lamp, or other gas appliances, unless such tube connection, hose or similar device shall have been approved by the Inspector of Gas & Gas Meters of Newark.

Section 2. It shall be the duty of the Board of Health of the City of Newark, its officers and employees, the Superintendent of Buildings, the Assistant Superintendent of Buildings, the Police Officers of the City of Newark, the Bureau of Combustibles and Fire Risks, and the said Inspector of Gas and Gas Meters of the City of Newark to enforce the provisions of this ordinance.

Section 3. Any person, firm or corporation which shall be convicted of a violation of this ordinance shall forfeit and pay a penalty of Twenty Dollars ($20) for each offence.

Section 4. All ordinances and parts of ordinances inconsistent with the provisions of this ordinance be and the same are hereby repealed.

Section 5. This ordinance shall take effect immediately.

P. C. O'BRIEN,
President of Common Council.
A. ARCHIBALD,
City Clerk.
THOMAS L. RAYMOND,
Mayor.

Adopted March 3, 1917.

Presented to the Mayor for his approval March 3, 1917.

Approved March 13, 1917.

The realization of the necessity of enforcing this ordinance from the user's standpoint will make the inspection department a trifle lenient at the beginning, but the standard will be raised until as safe a gas hose is found.

California Company Sold

The Hemet-San Jacinto Gas Company, of Hemet, Cal., has made application to the railroad commission of that state to sell all its physical, real and personal property to the Southwestern Gas Company.

The Southwestern Gas Company has a capital stock of $75,000, and will make application to the railroad commission to issue $50,000 worth of first mortgage bonds. The new company anticipates the addition of 100 consumers to its lines immediately, and this Fall expects to install a high pressure system, thereby greatly increasing their consumers.

The new officers are Claude H. Webber, president, to whom we are indebted for this information; Lucy Webber, vice-president, and L. A. Coffee, secretary.

Coke Shortage Beginning To Show

There is a serious shortage in coke in Detroit, Mich., at the present time.

The Detroit City Gas Company have discontinued deliveries on the west side and in other portions of the city orders are being taken for deliveries in two weeks' time.

Shortage is due to the increased consumption of gas and the coke that is ordinarily sold is being used in the water-gas process.

New House in Worcester Equipped with Gas Heaters

A complete gas heater equipment has been installed in a new house at 33 Howland Terrace, Worcester, Mass., built for investment by Herbert C. Fisher, real estate dealer, State Mutual Building.

General Fire Extinguisher Company, Providence, R. I., which controls the gas-heating apparatus which has been installed on Mr. Fisher's property, after securing the rights to it, worked for a year or more improving it before putting it on the market.

The method of heating a room is similar to the steam radiator in so far as the container of heat goes. It is on the same lines as an ordinary radiator, except that in the center of the radiator three of the pipes are cut short in order to fit the burner box to it, and have it a few inches from the floor.

The gas heater, one which is attached to each radiator used, is operated by a thermostat. Setting the thermostat at 65 degrees will be the means of keeping the room at that temperature.

The burner box, or firebox, is of heavy steel, and underneath it, exposed, is a diaphragm somewhat similar to a carburetor for a gas engine, where the flame is regulated. There is a pilot light which keeps a tiny flame always ready. A half turn of a screw sets the gas flowing into the burner, and another slight turn of a screw provides the air, to intensify the blaze. The air is generated in the cellar by a 1-15-horsepower electric motor, to which is attached an aluminum fan.

The motor is of heavier construction than ordinarily for a motor of its horsepower, and can run eight months continuous with oiling it every three or four months.

The air pumped into each burner box for each radiator produces a vacuum. There is no open flame which would allow any odor of escaping gas in the room. Opening the burner box door instantly shuts off the gas as the vacuum is broken. Closing the door again, the heater instantly begins working.

By using this new method of gas heating, a person may turn on the thermostat a short time before arising in the morning and have his house warm when he gets up. Various temperatures can be obtained by regulating the thermostat.

Mr. Fisher's new house is modern throughout, and the new gas heating apparatus makes it the most improved single-family cottage type of dwelling in Worcester.

Receiver Appointed at Princeton, Ind.

Attorney Marsh T. Lewis has been appointed receiver for the Consumers Gas Company of Princeton, Ind., and will qualify with a bond for $10,000.

This action was taken in the circuit court recently at the request of the Mercantile Trust & Savings Company, Trustee, of Evansville. The papers were filed by Funkhouser, Funkhouser & Markel, an Evansville legal firm.

It is estimated that the total bonded and other indebtedness of the defendant company is about $70,000.

The Gas Company gave voluntary consent to the receivership proceedings.

Knoxville Company Overthrows "13th" Superstition by Big Special Sale

Taking advantage of the psychic influence of Friday, April 13, to arouse attention, the Knoxville Gas Company, operated by Henry L. Doherty & Company, staged a gas range sale for that day, using unique advertisements which played up "13." As a result twenty-five gas ranges and twenty-five gas water heaters were disposed of for a total of $1,200. W. E. Carden of the new business department alone sold thirteen ranges during the day.

Part of the effective advertisement follows:

SPECIAL OFFER — LUCKY FRIDAY, THE 13TH.

A SPECIAL DISCOUNT OF 13 PER CENT. WILL BE ALLOWED ON THIS DATE.

You have been thinking of installing a gas range or water heater in your home this summer.

Why not take advantage of this offer and enjoy the same comforts and conveniences your neighbors are enjoying.

FRIDAY THE 13TH.

KNOXVILLE GAS COMPAY.

Results of Industrial Fuel Investigation Cause Changes

The survey started last November among the Doherty artificial gas properties to determine the possibilities of substituting gas for other fuels in the industrial field is practically completed, states the May issue of *Doherty News*, and after careful study suitable means have been provided to secure prospective business. The first move will be the establishing of a central combustion department at Toledo.

The survey reveals competing fuels in the various communities in the following proportions: oil, 60 per cent.; coal, 25 per cent.; coke, 15 to 20 per cent., and from 2 to 3 per cent. of wood, kerosene and gasoline.

Based upon the average costs of coal, coke and oil, and with gas selling at about 50 cents per 1,000 cu. ft., the effectiveness of gas to secure this business must be approximately six times coal, four and a half times coke, and twice for oil. From the experience gained by experiments and actual installations of industrial fuel gas appliances, Henry O. Loebell head of the Industrial Heating Department, asserts that proper appliances and utilization will surmount these handicaps, and the organization will be in a position in the near future to secure a great proportion of this prospective business, particularly the 60 per cent. that uses oil as fuel for high temperature operations.

NORMAL PRICES USED IN COMPARISON

In comparing the cost of the various fuels with gas, the present abnormal prices for these products were not used as a basis, but rather the normal price in each instance.

The survey further reveals enormous possibilities for increased output for the gas properties. Some of the estimated increased outputs, if the possibilities are realized, as compared with the output of February, 1917, are as follows:

	Per Cent.
Bristol	330
Danbury	31
Denver	95
Fremont	90
Hattiesburg	125
Knoxville	450
Lebanon	540
Lincoln	50
Meridian	500
Montgomery	230
Pueblo	90
Salina	70
Sedalia	90
Spokane	95
Toledo	1250
Tonawanda	770

Central Service Department Established at Toledo

The personnel and equipment of the industrial heating department at Caney, Kan., will be removed to Toledo. Caney was ideal for the combustion experimental work, but has outlived its usefulness. The next step is the utilization of the data obtained from these experiments, and Toledo, because of its central location, is the logical site. Moreover, Toledo offers the greatest field for expansion and has all kinds of gas available for use.

While the industrial heating department has been the important factor in the expansion of the artificial gas business within the last six months, the industrial business secured is using, to a great extent, standard appliances, but future efforts will be the designating of special appliances for industries not now provided for by manufacturers.

Following the recommendations of the industrial heating department for greater efficiencies in heating operations in the oil fields of the Empire Gas & Fuel Company, W. G. Williams, former head of the construction department of the organization, has removed to Bartlesville, Okla., to look after this work, as well as efficiency work in the compressor stations and refineries, and all other operating plants that come under the southwestern group of natural gas and oil properties. E. J. Billings, head of the results department, is assisting in getting all heating operations in this territory on a parity with those found in a central station.

East Berlin, Conn.—The extension of gas service to this town is being agitated.

New Ordinance for Chicago Heat Standard

The People's Gas, Light & Coke Company will present a new ordinance to the City Council of Chicago whereby it is hoped to be given permission to produce gas under the calorific standard. The ordinance has been virtually agreed upon by representatives of the city and the company. Under this method the heat units will be increased while the candlepower will be reduced.

The requirements for heat units under the new ordinance will be 565 a cubic foot of gas, and candlepower is to be dropped to 16 with a further lowering until candlepower of gas furnished reaches 9, which standard is to be maintained for a year. The new rates proposed are 30 cents for the first 350 cu. ft. of gas and then 70 cents per 1,000 cu. ft. to 10,000.

The city council committee on gas, oil and electric light has approved the chief features of the new gas rate ordinance and the complete measure probably will be recommended for passage next week. The company states that if the new standard is not adopted the company will be forced to pay $4,185,000 for its oil this year, against $2,080,000 in 1915, and for its coal the company is now paying $7.30 a ton for hard coal to replace coke it was able to buy for $4.72 a ton in 1915.

One feature of the new ordinance is termed "consumers' damages." These damages are to be paid back to consumers yearly by the company for any failures it may make in reaching standards with the gas it furnishes as shown by the daily tests. The city testing bureau is to make daily tests of gas and the drop of a single heat unit will cost the company, under the terms of the ordinance, $60 a day.

Wilmington, Ohio, Plant to Have New Holder

The Wilmington (Ohio) Gas, Light & Coke Company has let the contract for the first of the extensive improvements to be made in the local plant, following the recent increase in capitalization. The first improvement ordered was the building of a new holder, or storage tank, which will be sufficiently large to take care of the needs of the city for many years. The contractor expects to have the work completed before next fall.

20 Ambulances for France

B. G. Dawes, president of the Ohio Cities Gas Company of Columbus, Ohio, and some of his friends have given a complete field ambulance unit to the American Ambulance Field Service for duty in France. The unit will comprise twenty motor ambulances, a repair car and the necessary equipment. The twenty drivers, it was announced, are students of Marietta College and one of them will be Gates Dawes, a nephew of the donor.

The unit will be known as the Marietta Ambulance Corps and it will sail for France about the end of this week. The party is expected to reach this city on Tuesday, May 22, and they will be the guests of the Ohio Society. A luncheon will be given in their honor on May 25 at the Bankers Club, 120 Broadway, by Edwin F. Rorebeck, vice-president of the Metropolitan Trust Company.

At a meeting of the Millinery Branch of the American Ambulance held in the rooms of the Eastern Millinery Association, the Fifth Avenue Building, it was announced that $12,275 had been raised for the millinery unit. Of this amount $3,050 was raised by a sub-committee within two hours after the announcement. Samuel Zucker, chairman, said that the response had been so generous that the committee had decided to equip and send to France four ambulances instead of two. An effort to raise $96,000 will be made.

New Mine to Begin to Supply Coal

The subsidiaries of the General Gas & Electric Company and the Eastern Power & Light Company are soon to begin to get coal from the recently purchased mine of the Kighter Coal Company. It is expected to double the output of the coal property within the next three months, and a storage system will be installed so as to operate the mine at a uniform rate the whole year around. The railroad systems of the subsidiary companies have their maximum demands for coal during the summer while those companies furnishing a large amount of lighting have theirs in the winter. Those companies whose business is mainly in the supplying of power operate on a uniform demand throughout the year. By arranging shipments of coal in accordance with the demands, the shipments can be maintained at virtually a uniform rate.

Standard Gas Company Reports Success of Gas Range Week

The entire district covered by the Standard Gas Company, comprising 21 towns, reports the most successful sales week in the history of the company, according to C. J. De Mers, commercial manager, at Keyport, N. J.

The idea of using a vacant store window for display purposes was made use of, and was one of the big events of the week, creating not a little comment. This window, as it appeared, is shown in the accompanying illustration.

The prices of every range and water heater were increased to from $10 to $30 more than they were last year, yet the sales exceeded last year's record greatly. Undoubtedly, this was due entirely to the large amount of advertising placed before the public, including gas bill stickers, newspaper ads, circular letters, window displays and window cards which were placed in each merchant's window. The business men co-operated with the Standard company to a remarkable extent, the window cards reading as follows:

GAS RANGE WEEK
May 7th to May 12th
VISIT THE GAS OFFICE

These measured 12 in. square, and each one of the company's automobiles carried one on each side.

The only inducement offered was a 10 per cent reduction, and allowances on old stoves, only where these were in such condition that they could be sold rapidly. Quite a number of old coal stoves were brought in.

The record sales day was Saturday, May 12, when 38 ranges, 22 of which were cabinets, and 14 water heaters, were sold.

The standard Gas Company anticipates the launching of a vigorous campaign on water heaters during Water Heater Week in June.

VACANT STORE WINDOW UTILIZED DURING GAS RANGE WEEK

Receivers' Sale at Austin, Tex.

The District Court of the United States for the Western District of Texas has recently given notice of the sale of the property of the Columbus Gas Construction Company, as follows:

Notice is hereby given that the Receiver of the above estate has made application for authority to sell at private sale for cash the following portions of the assets of said estate, situated in the town of Taylor, Williamson County, Texas, and within the jurisdiction of this court, to wit:

1. One 32 Retort complete.
   Eight C. I. Retorts.
   One extra C. I. Burner.
   One Tank, 40 ft. x 8 ft.
   Two Tanks, 6 ft. x 32 ft., in sections.
   One lot of structural steel.
   One lot of asbestos coated corrugated roofing.
   Two 30 ft. spans of steel trusses for roofing.
   One lot of channels for rafters.
   One box of bolts and fittings for roof.
   One Ingersoll-Rand horizontal belt-driven air compressor, 10 ft. x 8 ft.
   One lot of pipes and fittings.
   Four casks of cement waterproofing compound.
   One lot of bricks.
   One warehouse truck.
   One Gandy belt, 5 in. wide by 30 ft. long.
2. All of said bankrupt's right, title and interest in and to lots 1 and 2 in Block 69 of the town of Taylor, Williamson County, Texas.

And that said application will be heard and passed upon by Hon. DuVal West, Judge of said Court, at his office in San Antonio, Texas, on May 26, 1917, at 10 o'clock A. M., at which time all persons interested may appear and show cause, if any they have, why said authority should not be granted.

Austin, Texas, May 12, 1917.
D. H. HART, *Clerk*,
By A. B. COFFEE, *Deputy*.

New Company to Supply Natural Gas to New Orleans

A company has been formed and has secured lands and rights of way to pipe natural gas from the wells of Terrebonne Parish, forty-five miles away, to New Orleans, La., for use, first, in factories, and later, in the homes of that city.

Majority of Bonds of Buffalo Gas Company Bought

The purchase of a majority of the outstanding bonds of the Buffalo Gas Company by Louis H. Gethoefer, formerly of Buffalo and now president of the Pittsburgh Trust Company is announced. So far the interests represented by Mr. Gethoefer have not been made known. It is understood that eighty per cent of the $5,900,000 outstanding bonds were secured by Mr. Gethoefer at about forty per cent of par value.

The purchase was made from William V. King of the Columbia Trust Company of New York, representing a bondholders' committee, as the Buffalo Gas Company is in the hands of Alexander Humphreys of New York and Harry T. Ramsdell of this city as receivers, with Louis L. Babcock as counsel.

The taking over of the controlling interest of the company, its plants and gas lines, may lead to a reorganization.

(*Continued from page* 519)

Preserves. To include strawberry preserves, strawberry jam, strawberry and rhubarb jam, pineapple marmalade, and pineapple and rhubarb conserve.

FOLDER NO. 2—FOR JULY.

Short introduction on canning and preserving, and the use of gas (continued.) However, each introduction will be complete in itself.

Canned Vegetables. To include Swiss chard, new beets, carrots, string beans, and pulp for making green pea soup.

Canned Fruits. To include raspberries, loganberries, sweet cherries, currants, gooseberries and sour cherries.

Preserves. To include raspberry jam, loganberry jam, cherry conserve, gooseberry jam, currant jelly and spiced currants.

About seventeen recipes.

FOLDER NO. 3—FOR AUGUST.

Short introduction on canning and preserving, and the use of gas (continued.)

Canned Vegetables. To include corn, lima beans, okra, tomatoes, succotash, mushrooms, and egg plant. Also tomato puree and mixed soup vegetables.

Canned Fruits. To include blackberries, blueberries, huckleberries, grapes, plums and apricots.

Preserves. Blackberry jam, blueberry and raspberry jam, Damson conserve, peach marmalade, and wild grape and blackberry jelly.

About twenty recipes.

FOLDER NO. 4—FOR SEPTEMBER.

Short introduction on canning and preserving, and the use of gas (continued.)

Canned Vegetables. To include green and red peppers, pimentoes, cabbage, cauliflower, and Brussels sprouts.

Pickling. To include chili sauce, apple and tomato chutney and grape catsup as well as tomato catsup.

Canned Fruits. To include peaches, pears, figs, and cantaloupe, and also grape juice.

Preserves. To include pear ginger, fig marmalade, spiced cantaloupe and grape conserve.

About fifteen recipes.

FOLDER NO. 5—FOR OCTOBER.

Short introduction on canning and preserving, and the use of gas (continued.)

Canned Vegetables. To include winter squash and pumpkin, plain and as pie filling, sweet potatoes, parsnips and turnips.

Pickling. To include peaches and pears.

Canned Fruits. To include apples, citron, quinces.

Preserves. To include apple butter, tomato butter, green tomato preserves, quince honey, quince jelly, apple and mint jelly and yellow tomato preserves.

About fifteen recipes.

FOLDER NO. 6—FOR NOVEMBER.

Short introduction on canning and preserving, and the use of gas (continued.)

Canned Fruits. To include oranges, kumquats, cranberries, and baked apples, also baked apple sauce, and boiled cider.

Preserves. To include orange marmalade, grape fruit marmalade, preserved kumquats, pumpkin butter, apple and ginger jam, spiced cranberries and cranberry conserve. Also cranberry and apple jelly.

Miscellaneous. To include mince meat.

About fifteen recipes.

The folders and posters will tie up as closely as possible with each other, and it is noted that each folder deals with fruits and vegetables as they come into season. Housewives will certainly appreciate the definite information given to them in such convenient form and considerable good-will toward the gas company will undoubtedly be aroused. The folders are to be purchased by gas companies from the association practically at cost, and distributed with gas bills or in any other manner that seems economical or feasible. Here again, other merchants of the town may be willing to inclose such folders with their monthly statements.

Window Displays. The association will furnish once a month a suggestion for a window display prepared as a working demonstration of cooking and preserving particular fruits or vegetables. Such displays should be used for at least one week in each month. Where it is possible, the gas company should encourage the department stores, wholesale and retail grocers and produce dealers to reproduce the gas company's displays. The gas company should, of course, offer to loan, in such cases, the range and other gas appliances that may be needed.

CO-OPERATION WITH WOMEN'S CLUBS, DOMESTIC SCIENCE SCHOOLS, ETC.

The association will prepare and furnish gratis, to gas companies, several lectures which may be delivered by a gas company representative before local women's clubs, church societies, domestic science and high school classes, or turned over to these organizations to use as they may desire. These lectures will be admirably suited to accompany actual demonstrations of canning and preserving on a gas range.

PUBLICITY AND LITERATURE AVAILABLE TO GAS COMPANIES.

The Department of Agriculture will furnish articles from month to month for publication in newspapers and women's magazines. This is but one part of the intensive plan for food preservation that the department is to conduct. The association will keep gas companies in touch with this work.

The Department of Agriculture has already prepared a large amount of literature on this subject and gas companies may secure it for general distribution upon application to Washington. We suggest that gas companies write to the Department of Agriculture for a complete set of the pamphlets in which they will find a valuable fund of information to assist in the preparation of timely newspaper and advertising copy.

GENERAL SUGGESTIONS.

Newspaper ads. run by gas companies in accordance with their regular plans, should tie up with the preserving and canning idea.

A series of prizes may be offered for the best display of canned goods and preserves to housewives whose entries will be arranged in the gas company's window and judged by prominent members of women's clubs.

To all visitors at the gas company's show room may be given a set of gummed labels for fruit and vegetable jars. These can be purchased at low prices from the association in booklets, each containing twenty-four labels for each fruit and vegetable mentioned in the folder. This will form an inducement for the women to visit the gas company's show room.

Efforts should be made to induce the Mayor to issue a proclamation announcing this National movement and the call of the country to every woman to participate by preserving all fruits and vegetables raised, but not needed for immediate use, as well as by purchasing a quantity of fresh produce to can for the winter supply of food.

Furnish local newspapers with editorials and news items which will educate the public regarding the necessity of conserving their food supplies. Emphasize the threatened rise in prices of all foods, as well as the scarcity due to enormous exports being made to Europe.

Give publicity to the fact that you have booklets for distribution containing talks on canning and preserving, as well as many recipes for so handling seasonable fruits and vegetables.

Solicit the co-operation of grocers, produce dealers, department stores, etc., in spreading this information.

It will be a wise plan to delegate to some particular individual in your organization the preparation and carrying out of this campaign during the next six months. This will insure some one person's giving at least a share of his time to the campaign and will make him responsible for the proper co-ordination and execution of all its details.

Ask your salesman to suggest new ways to give this movement greater publicity. The company should arrange for the services of a woman with ability and experience as a demonstrator, whose duty it will be to appear before and secure the co-operation of women's clubs, church societies, civic and other organizations, domestic science and high-school classes.

Arrangements should also be made by the gas company to conduct a series of cooking and preserving demonstrations in the company's show rooms, invitations to be issued through various organizations of women, and through the company's newspaper advertising, and circulars.

Such is the campaign in outline. It has for its object the alleviation of a difficult condition for gas companies and the promotion of a means by which the housewives of America will save for their country and their Allies, food whose value in war times cannot be estimated. It is a plan that has already won the enthusiastic support of the Board of Directors, and those artists and authors who have been called upon to aid it. Now it remains for individual gas companies to take vigorous hold of it, and with their characteristic energy carry it through to success. Let Headquarters hear from you — your suggestions, opinions and plans for participating —at once.

The association will supply posters and folders at the following prices:

Posters—28 x 41 inches—5 colors 12c. each.

Folders — 6¼ x 3¼ inches — 6 pages—4 color front—$5 per M.

Water Still as a Source of Future Revenue for Gas Companies

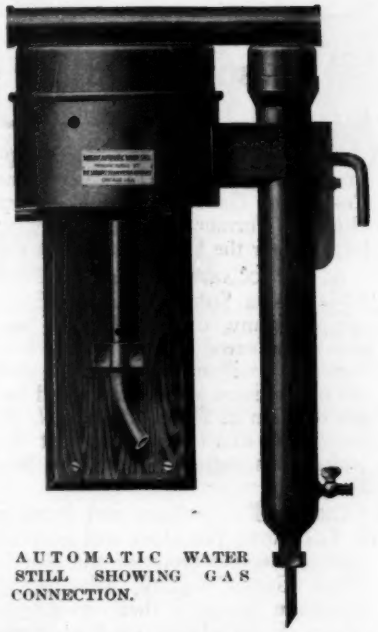
The value of distilled water is being realized more and more as investigations go on in that branch of medical service.

Dr. L. L. Von Wedeskind, medical commander of the United States Hospital Ship Solace, has been making some interesting investigations into the benefits to be derived from the use of water from which all mineral has been removed, and the results are told in a booklet entitled "Sargent Stills," issued by the Sargent Steam Meter Company.

"In a series of observations of thousands of men in the navy, between the ages of forty and sixty years, Dr. Von Wedeskind found that there was neither a high blood pressure nor arterio-sclerosis—limy stiff blood tubes. Of 70,000 men in the navy there was only one death last year from that daughter of high pressure—apoplexy. There is in use in the American navy distilled-mineral and germ-free water. Its adoption was made necessary to prevent such water-born maladies as typhoid, dysentery, smallpox and other infectious diseases."

The value of the gas man can be seen readily in sales profits, as well as increased gas consumption, as more and more household water stills are being put on the market. The still operates over any fire, but is particularly adapted to a gas range and requires no more attention than the ordinary tea kettle. The Sargent Still is unique in that it aerates the water with sterilized air.

The Automatic Still has been developed for continuous running without attention. The accompanying illustration shows this model. It is connected up to the running water and to the gas. The distilled water may be piped into a five gallon bottle and the only attention necessary is to remove the full bottles. When large quantities of water are required for home or for sale, this still has always proved a good investment. A larger size is made especially for commercial work, large drug stores and industrial plants, and the like. Many sales for this article are possible in every city to the live salesmen in gas companies, and increased revenue is readily available. These stills are manufactured by the Sargent Steam Meter Company, Chicago, Ill.



AUTOMATIC WATER STILL SHOWING GAS CONNECTION.

Gasoline Replaced by Gas Lights in Philadelphia

Director of Public Works Datesman of Philadelphia has announced that the work of substituting gas for gasoline in nearly all of the 11,204 public lamps scattered throughout the city, in which the substitution was to have been made, under the contract made with the United Gas Improvement Company by Mayor Smith, has been nearly completed.

There are still about 4,000 of the lamps to be changed, and all of this work will be completed within the next few weeks. When completed the changes will effect an annual saving to the city of about $145,000.

Four Massachusetts Companies Raise Rates

The Worcester Gas Company, the Springfield Gas Light Company, the Westfield Gas & Electric Company and the Holyoke Gas & Electric Company have raised their rates on account of higher operating costs. Notice has been sent to the Massachusetts Board of Gas and Electric Light, which has taken no action in the matter.

Personal Notes

THOMAS HIGGINS is to take temporary charge of the Tri City Gas Company, Gadsden, Ala., Harry Higgins, former manager, having left to enter the United States Army.

A. P. MCCARTHY, manager of the Philadelphia Suburban Gas & Electric Company, Coatesville, Pa., has been transferred to Pottstown. Mr. McCarthy will manage the gas and electric division at Pottstown and the gas division at Phoenixville. N. B. Bertolette, assistant manager at the Jenkintown station, will succeed Mr. McCarthy.

GEORGE F. GOODNOW and ALBERT C. GOODNOW, president and general manager, respectively, of the North Shore Gas Company, Waukegan, Ill., have resigned their positions. George F. Goodnow has been with the company for the past eighteen years, and his son about four years. Both Mr. Goodnow and his son will go into the consulting engineering business in Chicago and will confine themselves to the operation of gas properties.

EVERETT L. MILLARD, who for several years has been connected with the North Shore Gas Company, Waukegan, Ill., as its general counsel, has recently been elected president, succeeding George F. Goodnow.

WILLIAM A. BAEHR has been elected vice-president and consulting engineer of the North Shore Gas Company, Waukegan, Ill. Mr. Baehr is a prominent man in the gas field, and through his years of long experience as consulting engineer is well fitted for the position. He is also familiar with the plant and its system, having worked in the vicinity as an expert engineer.

THE UNITED GAS IMPROVEMENT COMPANY, Philadelphia, Pa., at a recent meeting of its shareholders re-elected the following officers: President, Samuel T. Bodine; vice-president, Randal Morgan; second vice-president, Walton Clark; third vice-president, Lewis Lillie; fourth vice-president, W. F. Douthirt; fifth vice-president, Paul Thompson; secretary, G. W. Curran. The following directors were also re-elected: Randal Morgan, William Wood, Morris L. Clothier, Effingham B. Morris, Thomas J. Dolan and Edward T. Stotesbury.

CHARLES A. GRUBER, who was formerly receiver of the Saranac Lake (N. Y.) Gas Company, has become connected with the Aluminum Company of America, at Massena, N. Y.

W. A. EHLERS, industrial fuel specialist for the National Commercial Gas Association, spent a week in Rutland, Vt., inspecting prospects for industrial fuel. From Rutland Mr. Ehlers went to Brockton, Mass.

C. A. MILLER, formerly with the Lebanon (Pa.) Gas & Fuel Company, operated by the Doherty Organization, has taken a position in the new business department of the Danbury & Bethel Gas & Electric Light Company, Danbury, Conn., another of the Doherty plants.

JOHN A. CLARK, JR., has been appointed general superintendent of distribution of the Public Service Gas Company of Newark, N. J.

JAMES LANE has been appointed inspector of manufacture of the Public Service Gas Company of Newark, N. J., and will have supervision of the manufacture of water gas at all works.

J. M. SPITZGLASS, mechanical engineer, with the People's Gas Light & Coke Company, Chicago, Ill., will resign June 1 to take a position as Consulting Engineer with the Republic Flow Meters Company, Chicago, Ill. He has been informally connected with the meters company for the past seven years and has taken a very active part in the development of the meter which they manufacture.

E. N. AVEGNO was unanimously elected president of the New Orleans (La.) Railway & Light Company at the Associated Employees meeting held on March 26.

S. J. DILL, vice-president of the United Gas & Electric Engineering Corporation, will devote his time to the oil interests of the corporation, having recently been elected president of the Utilities Oil & Refining Corporation, which owns a large producing oil property in southern Kansas. Mr. Dill will also take charge of the operation of the corporation's oil interests in Oklahoma and elsewhere.

E. P. SAWYER, president of the Oshkosh (Wis.) Gas Light Company has turned his yacht, the Badger Queen, over to the United States Government, through the Navy Department, for the sum of $1.00. The Badger Queen is one of the best equipped yachts in Wisconsin.

Construction Notes

Extensive Improvements at Waterbury, Conn.

The Waterbury Gas Light Company of Waterbury, Conn., has awarded the contract for the new coal gas plant, which is to be built, to the Gas Machinery Company of Cleveland, Ohio.

The plant is to be situated on a new piece of ground, just at the outskirts of the city. It is to have a daily capacity of 1,500,000 cu. ft., with provision for future extension to 6,000,000 cu. ft. daily, and consists chiefly of the following:

Twenty-seven inclined gas ovens, with waste heat boiler and all appurtenances; exhausting, condensing, washing and scrubbing apparatus; ammonia concentrator with carbonic acid expeller; purifiers, gas connections, etc.

The Gas Machinery Company reports that this is the sixth contract covering inclined gas ovens of this type.

New Machinery at Greenfield, Mass.

The Greenfield Gas Light Company is installing at their works a new 5-ft. set U.G.I. water gas machine, as well as two new condensors, which are to be placed between the relief holder and tar extractor to meet the increased demand.

A number of other changes are to be made in the gas line between the relief holder and the water gas machine, which are necessitated by this new installation.

The Greenfield plant was equipped with one 4-ft. gas set in 1907, and another 4-ft. machine was added to the works in 1914, and the business has increased to such an extent that the 4-ft. set had to be replaced by a 5-ft. machine in operation.

To show the increase at this company, the figures given by F. C. Butler, manager, to whom this journal is indebted for this information, are interesting:

"Seven years ago we were selling 15,000,000 feet of gas per year, and this year we are selling 50,000,000."

The industrial business has grown at a very promising rate, though not any better than the regular household sales.